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ORIGINAL ADDRESS.

ANNUAL ADDRESS OF THE PRESIDENT OF THE STATE MEDICAL SOCIETY OF PENNSYLVANIA.

Delivered at the Annual Meeting held at Bedford Springs, June 30, 1887,

BY R. DAVIS, M.D.

WE are living in an age of tumultuous mental activity. Science and art have advanced with giant strides. In both variety and extent, as well as in rapidity of development, their attainments have been prodigious. We are amazed when we reflect that there are men still living, and possibly within the sound of my voice, who can recollect when London Bridge was first lighted with gas; when steamboats and locomotives made their first experimental trips; when the first announcement was made that light itself could be made to paint the picture which it renders visible to our eyes; that electricity could transmit news with the velocity of light across continents and oceans, and that it could banish night with a light as clear as that of day.

Imagine, if you can, the confusion bordering on chaos which would be precipitated upon the world if it were again suddenly deprived of illuminating gas, the steam-engine, the railroad, the ocean steamer, the telegraph, the telephone, electric lights, and the thousand other practical applications of science which have come within a few years!

Hardly less stupendous are the movements in the philosophical world. Truly has it been said of the Darwinian theory that "it was a revelation which startled the whole world. It shed a light on the science of life which necessitated a rewriting of its history, destroying at a blow many previous systems of thought." Similar great changes have been wrought in the religious thought of to-day, as well as in the science of government. Everywhere "old forms of belief are being assailed and are crumbling to decay. Old things are passing away; a host of ancient prejudices are tottering to their fall; and such is the rapidity with which we are moving that scarcely have they been levelled with the dust when new creeds spring vigorously from their ruins."

The science of medicine has not escaped the general upheaval of thought which has characterized other fields of mental activity. Here, as elsewhere, primeval faiths have been shattered, and ancient ideas have been made to give way to the speculations and discoveries of the day. Revolutions in medicine have been witnessed almost equalling in magnitude those wrought by steam and electricity. Vaccination and induced anæsthesia are discoveries which are entitled to be placed among the wonders of science, and in the same rank with the railroad and the telegraph.

Just now I asked you to imagine how great the confusion and loss which the world would suffer if it were now suddenly deprived of steam-power, electricity, and illuminating gas. That we may appreciate the great changes—nay, let us call them advances—which have been made in medicine in the same period, I now ask you to try to picture to yourselves what would be our condition as a profession if we were again deprived of the knowledge of the prophylactic power of vaccination; the knowledge of auscultation and percussion; the knowledge of renal pathology as inaugurated by Bright; the differentiation of typhoid from typhus fever; the discovery of the reflex system of nerves; the appreciation of the self-limitation of certain diseases and knowledge of their natural history; the use of medication by the hypodermic method; the discovery of anæsthesia and its application in medicine, surgery, and obstetrics; the creation of histology and gynæcology; the discovery of new methods and instruments of research and diagnosis, by means of the microscope, stethoscope, clinical thermometer, laryngoscope, ophthalmoscope, and electric light; the knowledge of the impunity with which the peritoneal cavity may be invaded for the removal of tumors, foreign bodies, collections of matter, and even for the repair and removal of injured or diseased organs; the great advances in hygienic knowledge and preventive medicine; and, finally, the more recent and vastly important revelations respecting bacterial etiology and antisepsis. All this and much more was as a sealed book to those who lived prior to the birth of the oldest man present to-night.

An age of such intense mental activity is one favorable to progress, and progress is everywhere visible. But it is also an age highly favorable to the development of *scepticism*, and that, too, is visible everywhere. It defiantly unfurls its banner upon every rampart of thought; it invades no less the domain of medicine than that of religion; it is rampant in our midst to-day; it pursues the physician everywhere,—to the seclusion of his study, to the assembly of his fellows, and, alas! too often, to the bedside of the sick, palsying there the hand that should be strong for succor.

The student of medicine cannot have proceeded far in his course ere he is made painfully aware of the existence among medical men of this feeling of a lack of faith in the power of remedies to control or favorably influence the course of disease. Every avenue of information open to him is more or less tainted with this scepticism. He encounters it in the teachings of professors of colleges, in the medical writings of the day, and in his intercourse with medical men. "The older I grow, the less faith do I have in medicine," says the physician of lifelong experience. "I am tired of imposing upon the public," is the reason given by another for retiring from practice. Others boldly disavow their belief in the potency of any remedy whatever, and deliberately state their belief that disease is infinitely better left to itself. One distinguished medical teacher, who is also poet, author, and wit, declares, "If all the medicines were cast into the sea, it would be all the better for men, and all the worse for the fishes." Another author, in a work devoted to a careful consideration of the question of how much art can accomplish in the cure of disease, concludes as follows:

"In only a very minute proportion of the numerous diseases presented to us in practice, and these few for the most part of slight importance, are we able to act positively on the diseased part or its morbid condition; while the whole large remainder of diseases can be only indirectly and distantly and slightly touched by our agents in any case, and in a large proportion of cases cannot be touched at all." And again, "Only in a minute proportion of cases can it be asserted with the certainty of truth that the mediation of art has saved life that would have been lost without its interference; in other words, has of itself positively *cured* disease."

There can be no mistaking this language of Sir John Forbes. Indeed, he strongly inclines to the opinion that, if the balance could be struck between the good and the evil done by medical interference, especially with the acute diseases, the evil would be found to preponderate. He graciously adds, however, that he would by no means infer from this that the services of medical men at the bedside can be dispensed with; an inference which, though it may not be entirely clear how it can logically follow, is yet very acceptable to those of us whose daily business it is to administer to the wants of the sick.

There is also much of scepticism lurking in what is said and written concerning nature's efforts to cure disease,—the *vis medicatrix naturæ*, as it is called. We are told that we must not interfere with nature; we must not place obstacles in her path or attribute to ourselves what belongs to her. Or, we must imitate nature, assist nature, guide nature, etc. There is often more in this to perplex than to instruct. What definite idea, for example, of the physician's duty at the bedside can be derived from the perusal of the following, which is from the pen of a distinguished author and teacher?—

"Unfortunately, the temptations of the physician to active interference with the course of disease seem to be irresistible, and hence he acquires the habit of treating nature as if she were a laggard in her duty and required to be smartly pricked at times to prevent her slumbering at her post." This, if it means anything, means that you should do nothing. Nature needs no prompting, no aid, no guidance, no support. Our mission is simply to *watch* nature.

But most of those who write in this strain admit that at times nature goes astray and needs the guiding hand of the physician; or she may need his aid in the curative efforts which she may be making; or she may become exhausted in the struggle, and when her powers begin to fail then it is the physician's prerogative to come boldly to her support.

A blatant sceptic recently expressed himself upon this subject as follows:

"A doctor's faith in physic is the measure of his intellect. It is always in inverse proportion. Confidence in God and

nature points to large comprehension. If we have been nature's adjuncts in her extremity, we have fulfilled our mission."

At the conclusion of a recently published paper on this subject by another writer I find the following: "The true physician is he who watches with intelligent eye, though often sparing hand, the course of disease towards health; who aids, when needed, the curative efforts inaugurated by nature, and who boldly, heroically supports the failure of vital organs at the crises of disease." But when I turn to the body of the article to learn what the author regards as evidence of the "curative effects inaugurated by nature," I find that the burden of his argument has been to prove that pain, fever, and inflammation are among the most beneficent of nature's therapeutic measures. Pain is nature's method of securing rest; fever is her means of killing the "disease-germs;" and inflammation is only nature's necessary means of repairing injury!

If, therefore, I would aid the "curative efforts inaugurated by nature," I must, I suppose, when pain is present, do what I can to increase it; or if fever, high temperature, exists, I must add fuel to the fire in order to make it too hot for the germs; and if inflammation, that most beneficent of all of nature's therapeutic measures, be present, I must "aid nature" by increasing its intensity!

Now, this may be an example of very advanced thought; it may be the "therapeutics of the future." But for the present I am free to say that I am not quite prepared to accept the new gospel, or to depart from the "good old way" of doing what I can to alleviate pain, to cool the hot blood of fever, and to quench the burning, destructive fires of inflammation.

What can we cure? is the momentous question which is thus forced upon our attention.

As we have seen, the answer which the extreme sceptic makes to the question is, virtually, "Nothing. Disease is better left to the natural physiological energy of the body, which is the only element in its cure." Others, less dogmatic, admit that "in a minute proportion of cases" some good may be done and lives saved by the intervention of art.

What is our answer to the question? Are we prepared to admit that we are all pursuing an *ignis-fatuus*, or that our power over disease is so inconsiderable? And especially are we willing to acknowledge that the evil done by treatment is more than enough to counterbalance the good?

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Very different from the views of these sceptics are those still entertained by the people upon this subject. The popular belief continues to be that medication has a most important part to play in the cure of *every* disease. The public mind has not yet been disabused of the idea that for every bane nature has provided an antidote, and for every disease a curative leaf or root; and that when sickness comes the subject of it cannot possibly recover unless he "takes something" or "does something" to cure it.

Physicians have now come to know that this is an erroneous idea. We are all now tolerably familiar with the fact that many diseases are self-limited and tend intrinsically to recovery; and, therefore, that a large proportion of the cases of illness which occur among men would get well of their own accord and without any treatment whatever. Patent as this truth is to us now, yet it is one which the profession was long in recognizing.

It is only sixty-five years since Dr. Jacob Bigelow wrote and published his celebrated paper on self-limited diseases, and to that paper is generally accorded the credit of being the first to contain a distinct enunciation and demonstration of the truth that self-limitation is one of the laws that govern a large number of morbid processes. Subsequent investigation has served only to demonstrate more clearly the correctness of Dr. Bigelow's conclusions, and to lengthen greatly his catalogue of self-limited diseases. The great importance of this discovery is now generally conceded. It constitutes one of the most important epochs in the medical history of the century. Its influence upon therapeutics has been very great. It was the forerunner and great moving cause of that great change in practice, amounting to a veritable revolution, which consisted in the abandonment of what is known as the antiphlogistic treatment—blood-letting, purging, vomiting, mercurialization, counter-irritation, and starvation diet, including the withholding of cold water in fever—and the substitution therefor of what is known as the expectant treatment.

It is not my purpose to discuss the rela-

tive merits of these two plans of treatment, further than to express the conviction that, while the contribution to therapeutics of the expectant treatment has, in the language of Dr. Draper, "exposed many fallacies, dispelled many delusions, spared much needless suffering, and saved many lives," yet, on the other hand, it is itself chargeable with very grave errors, and has retarded in many ways the progress of the art of healing; and prominent among the evils it has engendered is this very scepticism in medicine which we are now considering.

The proneness of the human mind to run to extremes is well known. Having made the discovery that some diseases are self-limited, and being convinced that the old system of indiscriminate blood-letting, with large and frequent dosing, was in many cases not only unnecessary but productive of great harm, many medical men have rushed to the opposite extreme of therapeutic nihilism, allowing "nature," unaided and undisturbed, to continue on "in the even tenor of her way," thus embracing an error even more pernicious than the former.

Fellow-practitioners, how shall we convince, not the sceptics, for that would be a hopeless task, for sceptics in medicine, as elsewhere, deny established facts, and reject the evidences of their own senses,—but how shall we convince *ourselves* that our occupation is not entirely gone, that we still possess some curative power over disease, and that we are able, at least to some extent, by means of remedial measures to save lives that otherwise would be lost?

Several ways suggest themselves by which we may arrive at some conclusion upon this vital question of how many lives we are able to save by treatment.

For example, it would not be difficult, I fancy, to adduce from vital statistics convincing proofs that medical treatment, which in its widest signification includes not only the management of individual cases of illness, but also the prevention of disease and a supervision of the general bodily welfare, is capable of saving, and must be credited with having been the means of saving, many millions of human lives. It is claimed by statisticians that since the commencement of the present century human life in civilized countries has been prolonged more than thirty-five per cent., that the average duration of disease has been shortened fifty per cent., and that the average death-rate has been correspondingly lessened.

Sir T. Spencer Wells, in his inaugural address delivered last October before the Sanitary Congress, claimed that fifty years ago the average duration of life in Great Britain was about thirty years. *Now*, according to the healthy-life table, it is forty-nine years, a gain of nineteen years! It is certainly fair to conclude with him that a very large share of the credit for this very remarkable result is directly due to medical and sanitary works.

Some diseases, like the scurvy, once so wide-spread and destructive, and the plague, which in one year in London literally decimated the population, have in recent years, through the agency of medical science, been wellnigh banished from the civilized portion of the world.

Think also of the countless thousands of lives, to say nothing of the suffering and deformity, which have been saved by the discovery of vaccination alone.

A hundred years ago, epidemics of smallpox were as common and wide-spread as those of measles are now; and it was as rare for any one to grow up to manhood and womanhood without having suffered an attack of it, and bearing its ugly brand upon the person, as it is now to find an adult who has not had the mumps or the chicken-pox.

The mortality from this loathsome disease was then simply appalling. According to Professor Koch, of Berlin, one-twelfth of the human race was killed by it. In Sweden, according to the same high authority, eighty thousand people died annually of smallpox, while the number of deaths from this cause after the introduction of compulsory vaccination amounts to less than one thousand. Here, then, is a saving of seventy-nine thousand lives annually in that country alone by vaccination. Verily, therefore, has Jenner's discovery closed up one of the flood-gates of death.

Again, the records of hospitals throughout the world show that with the advance in medical knowledge and improved methods of treatment the rate of mortality in them has steadily and progressively diminished, not only in their surgical and obstetrical departments, but also in their medical. As proof that this diminished

mortality is in great part directly due to improved therapeutical methods, I might cite the records relating to typhoid fever in some of the great German hospitals. Those of the hospital at Basle are especially instructive.

From 1843 to 1865, which comprises a period when all therapeutic wisdom was supposed to have culminated in the expectant plan of treatment, the rate of mortality from typhoid was *twenty seven per cent.;* but since 1865, when active and systematic antipyretic treatment was adopted for this disease, the mortality has been reduced to *less than ten per cent.*

Other examples equally convincing might be given.

Another way of considering this question of how many lives we are able to save by treatment is in connection with the action of individual articles of the materia medica. Thus, it may be shown that Peruvian bark, since the discovery two centuries ago of its curative power in ague, has been the means of saving many millions of lives in this disease alone. It is claimed that in England, previous to the introduction of this remedy for intermittent fever, one in four and a half of all deaths was due to this disease, while after the use of this remedy and its alkaloid became generalized, only one death in three thousand was due to ague.

To appreciate the value to mankind of this drug, one needs to have lived in a distinctly malarious district during the prevalence of an epidemic of this disease, such as existed in many parts of Illinois in the fall of 1865, when so many were ill with it that it was found impossible to hold the courts, for want of judges, jurors, lawyers, clients, and witnesses; and as an illustration of the potency of this remedy I cite the fact that the notes of Dr. Dewitt, of White Hall, Illinois, show that for three months during the prevalence of this remarkable epidemic he found it necessary to make, on an average, but one and a half visits to a patient, including those ill with other diseases. In view of the great fatality of the disease and its tendency to continue indefinitely if left to go untreated by quinine, this result is one certainly not to be despised. Indeed, without quinine, many of the most productive parts of the world, and especially of our own great country, would be uninhabitable.

Opium is another drug which must be credited in a high degree with the life-saving power. One enthusiastic writer declares that "opium has assuaged more pain, soothed more sorrow, and saved more lives than all the other remedies in the materia medica." No fact in therapeutics is better established than that of the curative power of opium in peritonitis,—curative, that is, in the sense of arresting the disease and saving life.

And thus we might go on interrogating one agent after another,—alcohol, chloroform and ether, chloral, the bromides and iodides, mercury, ergot, salicylic acid, antipyrine, water, electricity, and many other agents; or we might extend the inquiry to whole classes of remedies,—the cathartics, the emetics, alteratives, tonics, diuretics, sedatives, antipyretics, and so through the list,—and the result of the inquiry could not fail to be to convince every candid mind that in something more than a "minute proportion of cases" we are able with these agencies so to act upon the various organs of the body as to cure diseased conditions and avert impending death.

But probably a truer estimate of the value of medication may be obtained by considering the subject in connection with the objects which the physician aims to accomplish by treatment. Measures of treatment such as are resorted to when disease already exists in the body are either abortive, curative, palliative, or supporting.

With reference to the first, it must be admitted that with our present knowledge the range in which abortive measures are effective is not very large. Quinine will abort an ague, and morphine given hypodermically will abort cholera morbus. Many contend also that opium given in the first stages of epidemic cholera will in a great number of cases "nip in the bud" that dread disease. Our fathers also believed that many of the acute inflammatory diseases could be arrested in their incipiency by a copious bleeding; and it is worthy of note that not a few of the ablest and most conservative thinkers of the present day are beginning to believe that they were more than half correct in their conclusions. It is especially worthy of note that the late Dr. Austin Flint, the great apostle, as was claimed, of conservatism in treatment, who was even accused, though unjustly, of a leaning towards therapeutic nihilism, had, in the last

communication which he was privileged to make to the profession,—the great address prepar d for the British Medical Association on "Medicine of the Future,"—placed on record his belief that "by the abandonment of blood-letting a useful measure of treatment was given up," and he confidently predicted that "the time will come—and that ere long, for it is now foreshadowed—when it will have its proper rank among therapeutic agencies." These remarks concerning blood-letting he made "with the understanding that they are, to a greater or less extent, applicable to the other so-called antiphlogistic measures."

The acknowledgment must be made, however, that the vast majority of acute affections are insusceptible of being suddenly arrested in their course by any remedies now known to us. The great error underlying the system of treatment pursued by our fathers in these cases consisted in their always making violent efforts to expel or throttle the disease by means of "medicinal dynamics:" all their efforts being directed towards the discovery of specific remedies.

The main battle-ground between the modern sceptic and the rational therapeutist is reached when we come to the consideration of *curative* measures of treatment. The sceptic contends that for the acute inflammatory and infectious diseases especially we have no curative agents. These he says are self-limited diseases, and will run their course uninfluenced by medication.

On the other hand, the rational therapeutist, while admitting their self-limited character, that the majority of cases will recover without treatment, and that, with the exception of quinine in ague, mercury and iodine in syphilis, salicin in rheumatism, opium in certain inflammatory and spasmodic diseases, and a few others, no *specifically curative* agents are known to us, is by no means willing to admit that therapeutics can render him no aid. Remembering that without treatment a large proportion of these cases will terminate fatally, the task which he sets for himself is to prevent this mortality. He now bends all his energies not so much to arresting the course of the disease as to *bringing his patient through it alive.*

Liebermeister says, "The disease will come to an end without any of our assistance; but the special business of the physician is to see to it that the patient outlives the disease. And this duty," he continues, "can often be accomplished by the application of symptomatic treatment in its wider sense, as well as through dietetic regulations. On the one hand, we must see to it that the usual incidents of the disease, if they show a tendency to grow especially burdensome or dangerous, as well as any suspicious accidental developments, are held within check, and so far as possible weakened in their power; on the other hand, we must strive to maintain the patient in such condition that he shall be able to offer the longest and the strongest resistance to deleterious influences of which his constitution is capable."

This is an admirable presentation of the principles which should govern our conduct of these cases. The statement that the physician should "see to it that the patient outlives the disease" is a truth which every practitioner, but especially every doubting Thomas among us, should have indelibly engrafted upon the mind.

Give specifics whenever you have good reason to believe in their existence; throttle the disease in its incipiency whenever you are sure it can be done; but when, as is generally the case, you are satisfied that this cannot be accomplished, then turn your attention to the patient, and "see to it" that he does not die before the disease has spent its force.

An important principle to be observed in the accomplishment of this object is that we should bend every effort to secure for the patient as nearly a normal condition as possible. In other words, the more comfortable we can make him, the more sleep we can secure for him, the more naturally his secretions are maintained, the more sure is he to recover.

Permit me a single illustration. Given a case of typhoid, scarlet, puerperal, or other fever, in which excessive elevation of temperature is a principal source of danger. The patient's temperature is 105°, his tongue is dry, he is wakeful, restless, and wildly delirious. You administer a full dose of antipyrine, with cold sponging, and in an hour his temperature is reduced to 102°, he perspires, his pulse softens, his tongue moistens, his delirium vanishes, and he falls into a refreshing sleep, lasting several hours. Is it possible that this is not an important factor in conducting the case to a successful issue? To conclude

otherwise is to disregard the teachings of experience and to violate the dictates of common sense. Granted that the fever with all the other distressing symptoms will return again and again, and the disease continue on unabridged in its duration; yet it cannot be that the drain on the vital energies produced by the high temperature will not be lessened, and thus often the vital spark be preserved which otherwise would be utterly extinguished. So even is the balance often between life and death in severe cases that a single respite of a few hours from distressing symptoms, such as active antipyretic treatment is capable of securing, is sufficient to turn the scale in favor of a restoration to health.

Call this expectancy if you will; but it is not that kind of expectancy which consists in a mere passive waiting on events, or which is inconsistent with "active interference with the course of disease," or which forbids our "treating nature as if she were a laggard in her duty and required to be smartly pricked at times to prevent her slumbering at her post." On the contrary, it is that kind of expectancy which admits of the use of the most potential medicines, not excepting the old abandoned antiphlogistic measures of blood-letting, purgation, and the rest,—provided that the one grand object be attained of preserving the patient's life until the disease ends. And the triumph of the physician who does this, if not quite so brilliant, is yet just as real as if he had throttled the disease in its incipiency. The mariner who amidst the storm steers his craft so skilfully as to prevent her being submerged by the waves or dashed against the rocks has just as truly saved the lives of those on board as if he had said to the winds and the waves, "Peace, be still," and been obeyed.

Measures of treatment instituted with a view to guarding against any dangerous accidental developments have a wide field of application, and when skilfully applied result in a vast saving of life. Measures used to prevent perforation of the bowels in typhoid fever, and to guard against systemic infection in diphtheria, are examples of this class.

But the most conspicuous example of their use, the one attended with the most brilliant results, is seen in the application of the principles of antisepsis to the surgical dressing of wounds. The accounts given of the results attained by this treatment in our hospitals read like a fairy-tale. Operations fearlessly undertaken which, even ten years ago, were regarded as without the pale of legitimate surgery; compound fractures made to unite without suppuration; amputation and resection wounds healing without the formation of a single drop of pus, and with a single dressing; large cold abscesses opened and their cavities made to close without further suppuration; large, deep arteries tied and the wounds permanently closed without fear of secondary hemorrhage; pus as an outcome of surgical operations a thing of the past; septicæmia, pyæmia, and erysipelas banished from the wards,—such is the account everywhere given of the results of this treatment. Verily, Listerism has revolutionized the art of surgery, and enables us now to save thousands of lives which, under the best treatment which prevailed even ten years ago, would have been lost.

But why should I longer weary you with attempts to point out the many ways in which remedial measures may be made available in the cure of disease? I could not hope, if that were necessary, to go over the whole ground. That I have not done so is evident from the fact that I have said little or nothing of what may be accomplished by the surgeon, the obstetrician, and the gynæcologist. I have said nothing of the large number of curable chronic diseases, which, though not all necessarily fatal when not treated, yet tend to continue on indefinitely and make life a burden. Neither have I attempted to point out how life may be prolonged, and existence made more tolerable, while it lasts, for those afflicted with confessedly incurable or necessarily fatal diseases. But I trust I have said enough to warrant me in saying—which I feel I may do in the name of this great Society—that there is absolutely no just ground for the existence of the pessimistic views of medicine which I have been combating.

While acknowledging that our art has not yet reached that degree of perfection which we all desire to see it attain,—that there are, alas! yet too many diseases over which we possess little or no curative control,—yet we contend that we are day by day making rapid strides towards the attainment of that perfection, that the number of incurable diseases is constantly diminishing, that the science is daily be-

coming more practical and the art more scientific, and that now enough of good can and is being accomplished by its instrumentality to justify the warmest enthusiasm of its votaries, and to entitle it to a place first in importance to mankind in the catalogue of arts.

It ought to require no argument to prove that scepticism in medicine is a great evil, and a hinderance to progress. I cannot conceive how a sceptic can be a good physician. He may be profoundly versed in the history and pathology of disease, but, as Broussais has well said, "the real physician is the one who cures; the observation which does not teach the art of healing is not that of a physician; it is that of a naturalist,"—a truth which I would especially commend to the consideration of those teachers of the theory and practice of medicine who spend hours in describing the lesions and natural history of disease and dismiss the principles and means of cure with few and distrustful words.

The sceptic in medicine must not only be devoid of enthusiasm in his work at the bedside, but he must also be lacking in resources, and "a physician without resources is a soldier disarmed: he inspires no confidence."

What man of us would not choose, if he were ill, to trust himself to the care of a physician who, like my gifted and scholarly friend and fellow-townsman Dr. Mayer, believes that "we have now means and remedies capable of controlling all the remedial morbid conditions of the human frame," and that "the success of modern medicine in the hands of cultivated practitioners is a matter of marvel, and is nearly all that we can desire,"—who, I say, would not sooner trust his life to a physician of such *large* faith, rather than to one who mockingly declares that the measure of a doctor's intellect is in inverse proportion to his faith in medicine?

I will close this address, already grown too long, by bringing before you a picture of the ideal physician drawn over fifty years ago by one of the ablest physicians and most attractive clinical teachers of the century, Latham, simply remarking that I cannot conceive it possible for a transcendent therapeutic doubter to become such a physician as is here described:

"Diseases are not abstractions; they are modes of acting, different from the natural and healthy modes,—modes of disorganizing, modes of suffering, and modes of dying; and there must be a living, moving, sentient body for all this.

"This body must be your study and your continual care,—your active, willing, earnest care. Nothing must make you shrink from it. In its weakness and infirmities, in the dishonors of its corruption, you must still value it, still stay by it, to mark its hunger and thirst, its sleeping and waking, its heat and its cold, to hear its complaints, to register its groans.

"And is it possible to feel an interest in all this? Ay, indeed it is; a greater, far greater, interest than ever painter or sculptor took in the form and beauties of its health.

"Whence comes this interest? At first, perhaps, it seldom comes naturally; a mere sense of duty must engender it; and still, for a while, a mere sense of duty must keep it alive. Presently the quick, curious, restless spirit of science enlivens it, and then it becomes an excitement, and then a pleasure, and then the deliberate choice of the mind.

"When the interest of attending the sick has reached this point, there arises from it, or has already arisen, a ready discernment of diseases, and a skill in the use of remedies. And the skill may exalt the interest, and the interest may improve the skill, until, in the process of time, experience forms the consummate practitioner.

"But does the interest of attending the sick necessarily stop here? The question may seem strange. If it has led to the readiest discernment and the highest skill, and to form the consummate practitioner, why need it go further?

"But what if humanity should warm it? Then, this interest, this excitement, this intellectual pleasure, is exalted into a principle and invested with a moral motive and passes into the heart. What if it be carried still further? What if religion should animate it? Why, then, happy indeed is that man whose mind, whose moral nature, and whose spiritual being are all harmoniously engaged in the daily business of his life; with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God.

"Such a man any of you may be; but you must begin by learning to stand at the sick-bed and make it your delight."

ORIGINAL COMMUNICATIONS.

OVARIAN TUMOR COMPLICATING PREGNANCY.

Read before the State Medical Society by title

BY E. E. MONTGOMERY, M.D.,

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THE field of ovarian disease has been so often gleaned that the hasty observer may deem it impossible to cull anything new therefrom. While I do not, in this paper, make any pretence to special originality, I hope to be able to present what experience teaches to be the most successful method of treating "Pregnancy complicated by Ovarian Tumor."

It may be questioned whether this complication is frequent enough to render the subject of sufficient importance to occupy the time of this scientific body. Its frequency may be appreciated when I am able, from a very cursory investigation of the literature, to present tables of over one hundred and fifty cases.

Ovarian disease does not preclude the possibility of conception so long as the ovaries contain healthy ovarian stroma.

In Spencer Wells's first one thousand cases of ovariotomy over two hundred children have since been born. A woman upon whom I did ovariotomy in the Philadelphia Hospital in 1879, whose second ovary contained so many cysts that its removal was debated, has been treated in the same institution for abortion. Schroeder, with the knife, and Pippingskoeld, with the galvanic cautery, have destroyed the cystic tissue of the second ovary, and the woman subsequently became pregnant. Indeed, rare instances have shown that the removal of the ovaries is not an absolute safeguard against conception. In such cases there are undoubtedly rudimentary masses of ovarian stroma or supplementary ovaries.

This probability of subsequent conception is a strong argument for the preservation of the second ovary during the period of sexual activity. Instead of complete extirpation, we should follow the course of Schroeder and Pippingskoeld.

The investigations of Jetter have shown that any form of ovarian cyst may complicate pregnancy. Of his collection of one hundred and sixty-six cases, ninety-seven were cystomata, thirty-seven dermoid, eleven carcinomata, and twenty-one uncertain. In a majority of the cases the tumor had existed for a length of time before pregnancy.

It is frequently asserted that owing to the pelvic hyperæmia consequent upon pregnancy the growth of these tumors is greatly accelerated. This growth, however, is probably more apparent than real. The great distention and distress are due to the natural growth of the tumor, plus the accompanying development of the uterus. Wernich not only accepts the accelerated growth as an established fact, but asserts that benign cysts, during pregnancy, are more likely to take on malignant action. Ruge explains the latter by claiming that the malignant element was originally present.

The dermoid cysts, from their smaller size, are most frequently found in the true pelvis.

The situation and size of the tumor are of marked significance in determining the prognosis. Of seventy-five cases, including those of Playfair, the tumor was found in the recto-vaginal septum in forty-one, on the right and left sides each five times. When small, the growths may frequently be overlooked, and the hinderance to delivery remain undiscovered or be ascribed to pelvic narrowing. Grigg's post-mortem researches in puerperal septicæmia render it probable that many cases of this disease are due to injury of unrecognized ovarian tumors during parturition.

The diagnosis of the coexistence of pregnancy and ovarian tumor is of the greatest importance, and oftentimes a difficult problem, but the limits of this paper will not permit of its discussion.

The mortality of ovarian tumor complicating pregnancy treated by the expectant plan is frightful. In the seventy-five cases culled from literature, thirty-one, or forty-one per cent., were fatal, while but twenty-two children, or twenty-nine per cent., are quoted as having been saved. The maternal mortality differs but little from that given by Litzman,—maternal, forty-three per cent.; fœtal, eighty-three per cent.

Such a death-rate urgently demands the investigation of other plans of treatment. When we come to the consideration of ovariotomy during pregnancy, we find far better results.

In the accompanying table of sixty-one cases, but seven, or less than eleven per

cent., were fatal; thirty-nine went to full term, or reached the period when the child became viable. The comparison of the results of ovariotomy (maternal mortality twelve per cent., fœtal mortality thirty-five per cent.) with those of the expectant treatment (maternal mortality forty-three per cent., fœtal mortality eighty-three per cent.) unquestionably demonstrates the value of the former. It is seen that the presence of pregnancy does not materially enhance the danger of ovariotomy. Further, it is rendered prominent that after performing ovariotomy the prognosis is extremely favorable for mother and child.

Finding that ovariotomy can give such good results, it remains then to be taken in consideration in each individual case.

The following points naturally present themselves for discussion:

1. Is ovariotomy the most secure and best proceeding for the removal of the complication?

2. Shall one in all cases do ovariotomy?

3. When is the most favorable time for its performance?

Those having large experience, as Spencer Wells, Tait, Cauchois, Olshausen, and the late Carl Schroeder, unite in commending ovariotomy as the most desirable proceeding. Most agree that it should be done at once in recognized ovarian tumor during pregnancy, on account of the danger of rupture of the cyst, twisting of the pedicle, exhaustion of the patient from the great abdominal distention, the possible complication of labor from the presence of the tumor, and the greatly increased mortality where ovariotomy is required during the period of puerperal convalescence. Its early performance is especially important when we take in consideration that Cohn has proved every sixth tumor to be probably malignant.

With the experience before us of the late Carl Schroeder, of fourteen cases and no deaths, Spencer Wells and Tait each eleven cases with one death each, the presence of pregnancy should hasten rather than retard the performance of ovariotomy.

The sixty-one cases of the accompanying table, with a mortality of eleven per cent., show that, while pregnancy does not improve the prognosis, it certainly does not make it worse.

Next to ovariotomy, tapping has always been more or less employed. Our first table will show that it is just about as dangerous and as free from danger as ovariotomy, with the disadvantage that it is not a radical operation. It is still further unsatisfactory in that it increases the danger of subsequent ovariotomy, and that there is greater danger of wounding neighboring organs. Artificial labor is now but little performed, for the reasons that it does not preclude the necessity of ovariotomy and that it diminishes the chances of the fœtus. Abortion and tapping do not preclude ovariotomy, but rather augment the necessity of its performance under unfavorable circumstances. If, then, in the complication of ovarian tumor with pregnancy, ovariotomy gives clearly better results than either the purely expectant treatment upon the one hand or tapping and abortion on the other, it is the most secure and best proceeding. But shall we do ovariotomy in all or only in isolated cases?

The answer to this question is the following: one must, in all cases in which ovarian tumor has been diagnosticated, do ovariotomy, because—

1. Ovariotomy is unavoidable, and the prognosis is not made worse by the existence of pregnancy.

2. The labor and convalescence with the tumor offers a far more unfavorable prognosis than without it.

3. Many tumors are malignant, although we cannot certainly so diagnose them; and it is difficult to say how far the spreading of the malignant element is favored by pregnancy and the resorption in convalescence.

The most favorable period for operation, as recognized by all operators, is during the first half of the pregnancy. In the last months, the increased hyperæmia and engorgement of the broad ligaments render it less favorable. Then, too, there is more probability of the convalescence being complicated by premature labor. The experience of a number of operators, as quoted in the table, shows that the operation can be performed in advanced stages of pregnancy with good results. The case of Pippingskoeld, in which it was performed during labor, is eminently encouraging.

My own experience (limited to one case) has led me to question whether, in the last stages of pregnancy, it would not be better to follow the excision of the ovarian tumor

by removal of the contents of the uterus through Cæsarean section.

The history of the case to which I allude is as follows. April 4, 1886, I was called in consultation with Dr. George Mays, to see Mrs. N., aged 24 years. She had been married less than a year, and had ceased to menstruate August 15, 1885. The menstrual function had become established during her thirteenth year, and, while regular, had always been scanty. For the past year she had had considerable distress and sense of weight in the pelvis, with occasional attacks of difficult micturition amounting, at times, to retention. The sensation of weight was greatly increased after marriage, but very naturally was attributed to pregnancy. At the date mentioned she believed herself in labor. She was complaining of severe pain, and the doctor informed me that upon digital examination he could not find the os. He had also unsuccessfully attempted to catheterize her. Inspecting the abdomen, the uterus was seen distending it as high as the ensiform cartilage; below, reaching nearly to the umbilicus, was a second spherical tumor which fluctuated and was evidently the distended bladder. By the vagina was felt a moderately elastic mass, filling up the curvature of the sacrum and reaching to the symphysis in front. I first supposed it a case of pregnancy in marked anteflexion of the uterus, in which we would find the os uteri situated high up; pushing the finger well up forward, I could reach the cervix just above and behind the symphysis. The os was undilated. The pressure of the cervix upon the neck of the bladder was the cause obstructing urination. By means of a male catheter nearly two quarts of urine were drawn off. The pelvis was filled up with a smooth round tumor which had pushed the bladder and uterus completely out of the pelvis. A rectal examination disclosed some projections from the cyst, showing that it was not a single cyst, although unmistakably of ovarian origin. Failing in the effort to push the tumor up while the patient was in the genu-pectoral posture, we were confronted by the necessity of relieving her of its presence to permit the expected delivery. She had now about reached the eighth month of pregnancy. Should we induce premature labor? This would not be possible unless the tumor was simultaneously reduced. Tapping was thought unwise, for the reason that the majority of these intra-pelvic ovarian growths are either dermoid or multilocular cysts, with very viscid contents. Our examination had shown the growth to be multilocular. The escape of its contents into the pelvic cavity would insure the development of peritonitis, and this would be still further aggravated by the bruising of the sac in the passage of the fœtus over it. Accordingly, it was thought better to do ovariotomy.

After thorough disinfection of the room, assisted by Drs. Mays, Warder, Eshleman, and West, the operation was performed, April 10, 1886. Beginning one inch below the umbilicus, an incision five inches long was made towards the symphysis. The left hand was passed between the left abdominal wall and uterus, behind and below the latter, until the cyst was reached. A small cyst projected above the pelvis and ruptured under the pressure of the hand. Dr. Mays introduced his hand into the vagina to facilitate the delivery of the larger cyst. It also ruptured under the pressure. The sac was raised up, and, having its origin on the right side, it was passed behind the uterus to the opposite side. Its pedicle was ligated with the Staffordshire knot, the tumor removed, the abdomen carefully cleansed, the wound closed with silk sutures. The wound was dressed with sublimated gauze and absorbent cotton. The operation was completed in forty minutes. The left ovary presented a cyst the size of an orange, but it was thought best not to remove it.

The night following the temperature was 102.2°, but soon subsided, not again reaching 102°, becoming normal on the fourth day. On the seventh day the sutures were removed and the dressing renewed. The central portion of the integument was ununited, the sutures having cut out. This was supported by adhesive plaster. A few hours later labor set in. This occurred during my absence. Dr. Mays, seeing serum oozing from the abdominal opening, applied the forceps and delivered a strong, healthy child. As the forceps were applied with the patient lying upon her back in the centre of the bed, the vulvar orifice was necessarily considerably lacerated. When I saw her about an hour after the labor, she was very much exhausted and had lost considerable blood. The second day following the temperature

began to rise, the lochia became offensive, the abdominal wound opened, and offensive serum was discharged. Intra-uterine injections were given, and the abdomen washed out with chlorinated soda and listerine, but despite all our measures the septic symptoms continued, and death occurred April 24, two weeks after the operation. It has since been a regret that while the abdomen was open I did not remove the contents of the uterus and close the uterine wound with sutures, after Sänger's method. I am encouraged to believe such a course would have been successful from those cases of Wells and Byford in which the uterus was injured during ovariotomy and emptied of its contents. In Byford's case the pregnancy had reached the eighth month. My patient showed no septic symptoms until after the delivery, and by the course suggested this source of origin would have been avoided.

Cases of Ovarian Tumor complicating Pregnancy Treated Expectantly.

No.	Reference.	Position of Tumor in Pelvis.	Left to Natural Powers.	Punctured.	Embryotomy.	Pushed above Brim.	Turning.	Forceps.	Rupture of Uterus.	Results. Mother.	Results. Child.	Remarks.
1	Hewlett, Med.-Chir. Tr., vol. vi.	Recto-vag. pouch.	1	...	...	...	...	...	...	D.	D.	Tumor flattened by pressure; extensively adherent.
2	Merriman, Ibid., vol. iii.....	"	...	...	1	...	...	...	...	D.	D.	
3	Ibid., vol. x.....	"	...	1	1	...	...	...	...	R.	D.	Preceded by puncture.
4	" "	"	...	...	...	1	...	...	...	R.	?	
5	" "	"	...	...	1	...	...	...	...	R.	D.	
6	" "	"	...	1	1	...	...	...	...	D.	D.	Preceded by puncture.
7	Parks, Ibid., vol. ii.....	"	1	...	...	...	...	...	...	R.	A.	
8	" " "	"	...	1	...	...	...	...	...	R.	A.	Same patient as No. 7.
9	" " "	"	...	...	...	1	...	...	...	R.	A.	
10	" " "	"	...	1	...	...	...	...	...	R.	A.	
11	" " "	"	1	...	...	...	...	...	...	D.	.....	Ovarian origin somewhat doubtful.
12	" " "	"	...	...	1	...	...	...	...	D	D.	
13	Lever, Guy's Hosp. Rep., 1842....	Left side of pelv.	...	...	...	1	...	...	...	R.	A.	
14	" " " " ...	"	...	...	...	1	...	...	...	R.	A.	
15	" " " " ...	Recto-vag. pouch.	...	...	...	...	...	...	...	D.	D.	Cyst ruptured spontaneously.
16	" " " " ...	Left side of pelv.	1	...	...	...	...	...	...	R.	A.	
17	" " " " ...	Recto-vag.....	..	1	...	...	...	...	...	R.	A.	
18	Ingleby, Facts and Cases in Obst.	"	1	...	...	...	...	...	...	R.	?	
19	" " " "	"	1	...	...	...	...	...	...	D.	?	
20	" " " "	"	...	1	1	...	...	...	...	R.	D.	Embryotomy on account of child's death.
21	" " " "	"	...	1	...	...	...	...	...	R.	A.	
22	Denman, vol. ii. p. 102.....	"	...	...	1	...	...	...	...	D.	D.	
23	" " "	"	...	1	...	...	...	...	...	R.	A.	
24	Jackson, Lond. Med. Rep., vol. ii.	"	...	1	...	...	...	...	...	R.	D.	
25	Behrend.....	?	...	...	1	...	...	...	...	R.	A.	
26	Beclard, Bulletin Lond., No. ...	?	...	1	...	...	...	...	...	D.	D.	Puncture followed by version.
27	Meissner, Dict. de Méd. et Chir....	?	...	...	...	...	...	...	...	R.	?	Cyst ruptured spontaneously.
28	" " " "	?	1	...	...	...	...	...	...	D.	D.	Arm - presentation; spontaneous evolution.
29	Herbineaux, Sur les Accouch. Lab.	.....	1	...	...	...	...	...	...	R.	?	
30	Baudelocque, Traité de l'Accouch.	Recto-vag pouch.	...	...	...	1	...	...	...	D.	?	
31	Moreau, Nouveau J. de Méd., 1820	Right side.....	...	...	...	...	1	...	...	R.	A.	
32	Steir (Puchelt).....	"	...	...	1	1	...	...	...	R.	D.	Perforation only on account of child's death.
33	Davis, Op. Midwif...	Recto-vag.....	1	...	...	...	...	...	...	R.	A.	
34	" " "	"	...	...	...	...	1	...	...	D.	D.	
35	Huper, Grafe, and Walter, Jour. de Chir.....	Right side.....	...	...	...	...	1	...	...	D.	D.	Cases 35 to 40, inclusive, were of malignant disease.
36	Shuzer (Puchelt).....	Left side.....	...	...	1	...	...	...	...	R.	D.	
37	J. G. Baker, Rev. Med., vol. vii...	?	1	...	...	...	...	...	...	D.	A.	
38	La Chapelle.....	?	...	...	...	...	1	...	...	D.	D.	
39	Greenhalgh, Guy's H. Rep., vol. i.	Posteriorly and laterally.....	1	...	...	...	...	...	...	D.	D.	
40	" " " "	Recto-vag. attached to bones.	...	...	...	...	...	...	...	D.	D.	Spontaneous premature labor. Cæsarean section.
41	" " " "	Recto-vag.....	...	...	...	...	...	...	...	R.	A.	Premature labor induced.
42	" " " "	"	1	...	...	..	1	...	...	R.	A.	" " spontaneous.
43	La Chapelle.....	"	...	...	...	...	...	...	...	D.	D.	
44	Perfect, vol. ii. p. 341.....	"	...	1	...	...	...	...	...	R.	D.	
45	Lees, Clinical Midwif., Case 46....	"	...	...	...	...	...	1	...	D.	D.	
46	" " " " 49....	"	...	...	1	...	...	...	...	D.	D.	

Cases of Ovarian Tumor complicating Pregnancy Treated Expectantly.—Continued.

No.	Reference.	Position of Tumor in Pelvis.	Left to Natural Powers.	Punctured.	Embryotomy.	Pushed above Brim.	Turning.	Forceps.	Rupture of Uterus.	Results. Mother.	Results. Child.	Remarks.
47	Lees, Clinical Midwif., Case 48....	Recto-vag.....	...	...	1	...	...	...	...	R.	D.	} Nature of case doubtful.
48	" " " " "	"	...	...	1	...	...	...	...	D.	D.	
49	Ward, Path Trans., vol. vi.....	?	...	...	...	...	...	...	1	D.	D.	
50	Mr. Wroman, Lanc., vol. ii., 1849.	Recto-vag.....	...	1	...	...	...	...	...	R.	A.	
51	Headland, Lancet, 1846.....	"	...	...	...	...	..	1	...	D.	A.	
52	Ramsbotham, Obst. Med., p. 216.	?	...	...	1	1	...	...	...	R.	D.	Perforation; after child's death tumor had disappeared.
53	Ashwell, Guy's Hosp. Rep., No. 2.	?	...	...	...	...	...	...	...	?	?	Spontaneous rupture.
54	Langley, Lond. M and S. Jour....	Right side.....	...	...	...	...	...	...	...	R.	A.	" "
55	Playfair.....	Recto-vag.....	...	...	1	...	...	...	...	D.	D.	
56	Benny, Obst. Trans.....	?	...	1	...	...	...	...	...	R.	A.	
57	" "	.....	...	...	...	...	...	1	...	R.	D.	Laceration of vagina; tumor passed through and removed by ligature.
58	Abdom. Tumors, Sp. Wells.....	Right side.....	1	...	...	...	...	...	...	D.	D.	Died four days after peritonitis from cyst-rupture; one child born during life of tumor.
59	" "	"	...	...	...	...	...	...	...	D.	D.	Premature labor spontaneous at sixth month; week later, after great pain, cyst ruptured; death immediate.
60	" "	Two tumors.....	...	...	...	...	...	...	...	D.	D.	Death from rupture of cyst; undelivered.
61 62	} " "	?	2	...	...	...	...	...	...	2 R.	2 D.	Ovariotomy a few weeks after labor; one died, other recovered
63	" "	Above.....	...	1	...	...	...	...	...	R.	A.	Subsequent successful ovariotomy.
64 65 66 67	} " "	?	...	4	...	...	...	...	...	4 R.	4 A.	One tapped three times, one twice, two once.
68	Obs. Tr. Lond., vol. xi. p. 266.....	?	...	...	...	...	1	...	...	R.	A.	Successful ovariotomy later.
69	Fischel.....	Recto-vag.....	...	...	...	1	...	..	...	R.	?	
70	Crawford, Med. Rec., 80, xviii. p. 473.....	?	...	1	...	...	...	...	...	R.	?	At a subsequent tapping pus was found; ovariotomy; recovery.
71	Wiart, Arch. de Tocol., 82, ix. 428.	Recto-vag.....	...	1	...	...	...	1	...	R.	?	Dermoid right ovary; subsequent enlargement, peritonitis, discharge of tumor and contents per rectum; recovery.
72	Warn, Obs. Tr., vol. xi., p. 198....	?	...	...	...	...	1	..	...	D.	?	Rupture of cyst.
73	Grigg, Br. Gy. J., 86-7, p. 264.....	Recto-vag.....	...	...	...	1	...	...	...	D.	?	Died following day.
74	" " " "	Left side.....	...	...	...	...	...	1	...	D.		Multilocular, suppurating, ovarian cyst.
75	" " " "	Recto-vag.....	...	..	...	...	...	..	...	D.		

Braxton Hicks.—Six cases left to nature; all did well.
Barnes saw death in one case from cyst-rupture at seventh month; in another peritonitis caused death.
Rogers saw five cases: one tapped before delivery, mother and child lived; a second went to full term, mother and child did well; three premature labors, all mothers lived.
Chadwick.—Three cases, non-interference; all recovered.
Battey.—Four cases, non-interference; three died from cyst-rupture; one died from abortion.
Sutton.—Two cases in which death followed abortion from twisted pedicles.

Table of Cases in which Ovariotomy was Performed during Pregnancy.

No.	Reference.	Operator.	Months Pregnant.	Result.	Remarks.
1	Zeits. f. Geb. u Gynäk., 1880, p. 383.	Schroeder.	7	R.	Delivered at full term.
2	"	"	4	"	Previously tapped; aborted thirteenth day.
3	"	"	3	"	Delivered at full term.
4	"	"	7	"	Premature delivery on fifth day.
5	"	"	3	"	Delivery at full term.
6	"	"	3	"	Normal delivery at full term.
7	"	"	4	"	Aborted in seventh week, followed by septic infection.

Table of Cases in which Ovariotomy was Performed during Pregnancy.—Continued.

No.	Reference.	Operator.	Months Pregnant.	Result.	Remarks.
*8	Abdominal tumor.	Spencer Wells.	4	R.	Delivered of a living child at full term.
9	"	"	3	"	" " " " "
10	"	"	3	"	" " " " "
11	"	"	4	"	" at sixth month.
12	"	"	7	"	" next morning after operation.
13	"	"	5	D.	Previous rupture of cyst; peritonitis and moribund when operation done; delivery nine hours later; death fifth day.
14	"	"	4	R.	Delivered at full term.
15	"	"	7	"	Child born twenty-five days later.
16	"	"	4	"	" at full term.
17	"	"	3	"	Abortion six days later.
†18	"	"	4½	"	Uterus opened by mistake; contents removed.
19	Austral. Med. Gazette, 1883-4, iii. p. 169.	Fortescue.	4	"	Accidental puncture of uterus; Porro's operation.
20	Berl. K. Wochenschrift, 1876, p. 172.	W. Baum.	4½	"	Aborted two days later.
21	Am. Journ. Obstetrics, 1886, xix. p. 1272.	Mundé.	5	"	Uninterrupted pregnancy.
22	Ib., p. 525.	Thornton.	3	"	Both ovaries removed; delivered eighth month; healthy child.
23	Canada Lancet, 1886-7, xix. p. 161.	Gardner.	3	"	Delivered at full term; living child.
24	Centralbl. f. Gynäk., 1887, xi. p. 139.	Barony.	6	"	" twenty-one days later.
25	Medical Record, 1882, xxi. p. 22.	Bennett.	3	"	Abortion ten days later.
26	London Lancet, 1885, ii. p. 985.	Stony.	3	"	Delivery at full term.
27	Am. Journ Obstetrics, 1880, xiii. p. 304.	Peppinskoeld.	8½	"	" seven hours after.
28	Trans. Am. Gyn. Soc., 1880, v. lxxxi. p. 100.	Wilson.	4	"	Continuation of pregnancy.
29	"	J. M. Sims.	4	"	Delivery at full term.
30	"	W. L. Atlee.	2	"	Died a month later from exhaustion.
31	"	"	?	"	Went to full term.
32	"	F. Bird.	?	"	Abortion two days later.
33	"	Gabahin.	6	"	Delivered at full term.
34	"	L. Tait.	7	D.	Labor sixth day after, and death in a few hours.
35	"	W. Baum.	6	"	Miscarriage day following; peritonitis resulted.
36	"	T. G. Thomas.	?	"	
37	"	J. G. Kimball.	3	"	Peritonitis.
38	"	"	3	"	"
39	Am. Journ. Obstetrics, 1879, xiii. p. 31.	W. H. Byford.	7	R.	Pregnancy unsuspected; uterus punctured; contents removed.
40	Austral. Med. Gazette, February, 1875.	Thomas Hillas.	8	"	Uterus accidentally wounded; opened; contents removed; living child.
41	Unpublished.	Montgomery.	7½	D.	Premature labor seventh day, followed by septicæmia; death thirteenth day.
42	Stratz Zeitschr. f. Geb. u. Gynäk., 1887.	Schroeder.	4	R.	At full term; convalescence normal; child living.
43	"	"	3	"	" twins; child living.
44	"	"	8	"	" forceps delivery; child living.
45	"	"	3	"	" child living.
46	"	"	3	"	" "
47	"	"	6	"	" "
48	"	"	6	"	" "
49	Unpublished private letter.	E. Y. Beall (Texas).	3	"	Operation May 12, 1887; course of gestation undisturbed.

* Winckel (Parvin's edition) operated twice; both recovered; no miscarriage.
† Tait (Disease of the Ovaries, fourth edition, p. 293) reports ten additional cases; all recovered.

REPORT ON RECENT STUDIES ON DISEASES OF THE CIRCULATORY APPARATUS.

BY J. P. CROZER GRIFFITH, M.D.

(Continued from page 666.)

THE PULSE—Continued.

II. VARIATIONS OF TENSION.

Low Tension.—Tension depends primarily on the resistance in the arterioles and capillaries. This resistance may be so slight that venous pulsation may be produced (differing in origin from that seen in aortic disease). The characteristic low-tension pulse is abrupt and short, and the artery is flattened completely between the beats. It may be dicrotic, undulatory, strong or weak, large or small. Pyrexia almost constantly relaxes the capillaries; hence there is low tension in fever. In the absence of fever, a pulse of low tension, unless it be a physiological peculiar-

ity, indicates cardiac weakness (not fatty heart, in which the pulse is usually slow). The symptoms are not characteristic. In this condition purgatives give rise to depression.

High Tension.—High tension of nervous origin, as in hysteria, cerebral and spinal diseases, rigors, and the cold stage of fever, is probably due to a spasm of the arterioles; while in that of blood-origin, as in renal diseases and allied conditions, the trouble rests chiefly with the capillaries. This conclusion is based on various grounds, which the author explains. The characteristic high-tension pulse is the *pulsus tardus*, slow and long. It may be either small or large. If the heart is weak, the artery will be *compressible* and yet *cord-like*. To this condition Broadbent applies the term "virtual tension." In it the access and subsidence of the pulse seem to be sudden and the pressure to last a certain time between them. Virtual tension is met with at the onset and at the close of renal disease, and is the characteristic pulse of dilatation of the heart. The causes of high tension are: (1) Heredity. (2) Kidney-diseases of all kinds except suppuration. (3) Gout and allied disorders, including affections attributed by Murchison to functional derangement of the liver. (4) Lead-poisoning, with or without renal disease. (5) Anæmia. In this it is certain that the tension is usually high. Cases of anæmia with very low tension are rare. The causes of the difference are not known. (6) Pregnancy. (7) Constipation. (8) Plethora. (9) Chronic bronchitis and emphysema.

The effects of high tension are hypertrophy or dilatation of the heart. Some contributory exciting cause usually co-operates to produce dilatation. Valvular changes, dilatation of the aorta, and cerebral hemorrhage are all results of high arterial tension. This tension is often overlooked in valvular disease, and cannot but throw still greater strain on the affected valve. It may be best detected in aortic insufficiency by feeling the pulse when the hand is well below the level of the shoulder, but not hanging down; and in mitral disease by trying it with the hand in different positions. Cases of kidney-disease (especially large white kidney) may occur without any tension whatever, there being less than the normal resistance in the arteries and capillaries. The prognosis in such cases is most unfavorable. Indeed, in acute albuminuria a favorable prognosis depends on the rapidity with which high arterial tension develops. In contracted kidney high tension is very rarely absent.

Functional Effects.—High tension may produce the most severe angina pectoris, or sudden dyspnœa, as though there were advanced heart-disease. Intermittent albuminuria is often due to it, combined in children with a strongly neurotic family history.

Treatment.—This is often not needed. Bleeding is a powerful means to reduce tension, and is usually only in extreme cases. It is useless after cerebral hemorrhage has occurred, but might save hundreds of lives if employed to reduce tension as a preventive measure. Tension can also be lowered by reducing the force of the heart or the peripheral resistance. The latter is the proper method, and may be accomplished either by relaxing the arterioles by nitro-glycerin or the nitrites, or, better, by eliminating from the blood, by diuretics, diaphoretics, or purgatives, the nitrogenized waste which, by its irritation, provokes the obstruction in the artero-capillary circulation.

THE PULSE IN HEART-DISEASE.

Aortic Stenosis.—The pulse in this affection is gradual and long, owing to the obstruction to the rapid flow of blood. It is small, full between the beats, and destitute of impact. When typical, it is one of the most peculiar pulses met with.

Aortic Regurgitation.—This pulse is too well known to require description. The author calls particular attention to the element of size, to the falling away of the blood-column when the arm is held up, and to the great increase of the collapsing character under the influence of pyrexia. The slightest departure from regularity is ominous.

Mitral Regurgitation.—This pulse often presents great irregularity, but this does not always indicate a dangerous failure of compensation.

Mitral Stenosis.—The pulse is regular, small, and full between the beats. When the heart fails, irregularity appears at the wrist, while the heart-beats are still regular in time. Finally, the irregularity of the pulse and its lack of correspondence with the irregular heart defy description.

The pulse of *hypertrophy* is that of its cause, and that of *dilatation* has been already described.

III. THE PULSE AND CEREBRAL AFFECTIONS.

Broadbent considers under this head only the effect produced on the brain by abnormal conditions of the circulation, omitting the converse of this.

Sleeplessness is due to many causes, and among others to the disturbed condition of the circulation. The first of these is high tension, virtual or actual. The immediate cause here probably is the inability of the tired arterioles of the cortex to shut off the pressure and produce the requisite anæmia. A mild mercurial aperient is the most efficient hypnotic, and sleep is obtained in an hour or two after its administration. Hot bathing, general or local, and a variety of other measures are also useful.

The second condition is an extremely low tension. This is a common cause in men of middle life and sedentary occupation. The patient has often an irresistible desire to sleep during the day, but cannot rest at night. He can sleep while sitting, but not when in the recumbent position. The pulse is variable, the heart weak, the arterioles relaxed, and hence while sitting the brain is anæmic, but while lying the vessels are overdistended. A tonic plan of treatment, with change of air, is indicated.

Convulsions and the Pulse.—Convulsions may attend exactly opposite states of the circulation. Death in convulsions may occur in rapid hemorrhage and in asphyxia, *i.e.*, from excessively low or unduly high arterial tension, tubercular meningitis, by the pressure of the effusion obstructing the circulation. Even slight causes may produce temporary arrest of the circulation. The author narrates two cases in adults where unconsciousness was repeatedly produced by paroxysms of coughing; and another in which convulsions appeared to be due to the increased intra-cranial pressure resulting from a thickening of the frontal bone. He follows this with a series of cases in which high arterial tension produced convulsions, and the patients were relieved by a reduction of the tension by therapeutic means. Uræmic convulsions are probably due as much to the high tension as to the poisonous matter. There is no doubt, at any rate, that blood-letting has often a remarkable effect in cutting them short.

Low arterial tension is much less commonly associated with convulsions. The author reports several cases, in one of which convulsions were brought on by every attempt of the patient to sit up.

It may be that a careful study of the pulse may throw some light on the forms of epilepsy and their treatment. Broadbent has been led by his experience to conclude that in essential epilepsy the arterial tension is low and variable or fluctuating. During pregnancy the fits often cease; and it is one of the effects of this condition that the arterial tension is increased. Epilepsy associated with high arterial tension usually comes on later in life, and is more amenable to treatment.

Violent maniacal delirium may be dependent on high tension of the pulse. The author has seen several instances of this.

Pulse and Melancholia.—The connection between melancholia and its allied mental states on the one hand, and the condition of the circulation on the other, is more direct and decided than can be traced in epilepsy. Senile melancholia is probably due to functional disturbance from an impeded circulation. Again, a family tendency to melancholia may be due to hereditary high tension of the pulse, and complete recovery in such cases shows that there has been no structural change. Protracted arterial tension may be, if not the cause, at least the index of the condition on which the mental state depends. It is probable, as the capillaries thicken as a result of high tension which has lasted for years, and the heart ceases to gain in strength, that the brain no longer receives a proper supply of healthy blood. At any rate, it is true that in a large proportion of cases of melancholia developing late in life, high arterial tension has been present. The author has obtained the best therapeutic results in such cases by endeavoring to strengthen the heart and to relieve the obstruction in the capillary system. The more acute the attack, the better the prospects of recovery.

Melancholia associated with extremely low tension usually proves incurable. The author reports the only case which he has ever seen recover.

As associated with the cerebral affection he says that, in the slowly developing par-

aplegia due to failing circulation, the lumbar enlargement of the cord does not receive sufficient blood, owing to the anatomical arrangement of the blood-supply. The symptoms are first noticed only after a night's rest, and pass away as the day goes on. He has seen this condition develop when the circulation was made sluggish either by very low tension or by high tension with an overtaxed heart.

THE RECOGNITION OF DILATATION OF THE RIGHT AURICLE.

Schrötter (*Medizinische Jahrbücher*, 1887, H. 1, 51) places this condition among the diseases of the thoracic viscera whose diagnosis is attended with great difficulty, and reports a most interesting case. The patient, a girl of 24 years, suffered with cyanosis, palpitation, dyspnœa, ascites, and œdema. The dilated cervical veins were distinctly and constantly pulsating. The apex-beat could be faintly felt in the sixth interspace outside the nipple-line. The cardiac percussion-dulness was normal on the left side, but stretched also to the right of the sternum, and was of a very peculiar shape. On this side good pulmonary resonance extended downward in the nipple-line to the sixth rib; one and one-half centimetres inside this it reached to the fourth rib; one and one-half centimetres still nearer the sternum it only touched the lower edge of the third, and close to the right sternal edge it reached the middle of the fourth rib. This area of dulness was more prominent than the corresponding region on the left side. The pulmonary second sound was accentuated. A double murmur was heard at the apex, and, with less strength, over the right ventricle. The pulse was weak and small. A few râles were heard in the lungs, especially on the right side below and behind. The liver was enlarged, and the spleen slightly so.

A diagnosis was made of insufficiency and stenosis of the mitral valve, together with insufficiency of the tricuspid. But the peculiar form of the percussion-dulness remained still to be explained. It was evidently not a simple enlargement of the heart in all directions, and the shape of the dulness contra-indicated pericardial effusion. The presence of aneurism of the aorta or of a mediastinal tumor was not supported by other symptoms. The diagnosis then lay between an encysted pleurisy, a pericardial effusion limited by adhesions to the right side of the heart, and a hugely dilated right ventricle. The presence of valvular disease indicated the last of these, but the fact that the area of dulness was not diminished during inspiration seemed to point to the first. The diagnosis of dilatation of the right ventricle was finally established by means of the hypodermic syringe. The needle was inserted and found to make swinging movements in time with the heart's action, and pure blood was obtained. No evil result followed, but the patient died some weeks afterwards. The autopsy confirmed the diagnosis throughout. There was found in addition a stenosis of the tricuspid valve and a retraction and contraction of the right lung, which was adherent to the pleura. This condition allowed the right ventricle to approach so closely to the chest-wall.

ON THE PATHOLOGICAL INDICATIONS OF VENOUS MURMURS IN ANÆMIC CONDITIONS.

In *Virchow's Archiv*, B. cvii. H. 3, 419, there appears an article on this subject by Apetz, who says that up to the elaborate work of Weil in 1875 very various opinions had been held regarding the significance of the venous hum in the jugulars. This author proved, as the result of observations on six hundred persons, that the phenomenon had no connection with any particular form of disease. Many later authors have not accepted this view. Gerhardt believes anæmia has a decided influence on the production of venous murmurs, and Guttmann, who has sought it in hundreds of cases, finds it far more frequently in anæmic persons. Induced by the variance of opinions, Apetz has auscultated the internal jugular veins of six hundred and sixty persons, including one hundred and fifteen markedly anæmic individuals. After a careful study of the relation of age and of the degree of anæmia to the presence of the venous murmur, he concludes that—

1. The occurrence of a murmur in the internal jugular is chiefly dependent upon age: the older the person, the less frequently is the murmur found.

2. Venous murmurs which become audible only on turning the head to the opposite side are physiological, and have no connection with anæmia.

3. Those heard when the head is straight

and the patient in the upright position, and from twenty to sixty years of age, have a certain pathological significance if they are loud and constantly present. Yet they are usually not sufficiently pronounced to be of value in the diagnosis of anæmia.

4. In general, venous murmurs possess no diagnostic value for chlorosis or other anæmic conditions.

OVERDISTENTION OF THE RIGHT VENTRICLE TREATED BY LEECHES.

F. C. Shattuck (*Boston Medical and Surgical Journal*, 1887, No. 17, 395) says the tendency of any block to the circulation is to produce an overdistention of the venous system. If the obstruction is in the arteries, the heart may be strong enough to overcome it; but when the left ventricle gives out, or when the trouble is at the mitral valve, the strain is thrown upon the right ventricle, which thereupon so often becomes incompetent. We then find all the symptoms of general, intense passive congestion developing. Our effort in such cases must be to relieve the engorgement by increasing the heart's power. Often this is impossible without an actual removal of fluid. Catharsis may then be employed, but is very exhausting; and, moreover, it frequently cannot be induced. The author advises in many grave cases the direct abstraction of blood, preferably by leeches followed by poulticing, since the removal of eight to ten ounces will often give surprising relief, and will afford the overburdened heart a chance to regain its power. He reports six cases, in five of which an amelioration of the threatening symptoms promptly followed the leeching. In the remaining case probably not enough blood was taken. He does not believe that two of his cases would have lived more than a few days if he had not drawn blood.

TRANSLATIONS.

GLUCOSE, GLYCOGEN, AND GLYCOGENY.—At a recent meeting of the Academy of Sciences, M. Chauveau presented a note entitled "Glucose, Glycogen, and Glycogeny in Relation to the Production of Heat and of Mechanical Labor in the Animal Economy." M. Chauveau believes himself to be in a position to affirm the preponderating part played by the glucose of the blood in organic combustion, which is the source of heat and of muscular action. The liver is, in truth, as Claude Bernard affirmed, a focus of incessant production of sugar, and by the side of the focus there exists another for its destruction which is quite as active. But the latter is not in the lungs; it is everywhere in the body, having its seat in the capillaries of the general circulation. The author bases his conclusions on the following results of his own experiments:

1. In fasting animals sugar exists in the blood of the arteries and veins of the circulatory system; but in the upper hepatic vessels the blood is richer in sugar than anywhere else, even when it has been obtained without arrest of the circulation, thus avoiding the causes of error arising from the stagnation of the blood in the liver: this organ then is really a sugar-producer.

2. This relative richness of glucose in the blood is observed in the upper hepatic veins not only in fasting animals, but also in animals that have been submitted to a prolonged fast, continued almost to the verge of inanition, when the sugar derived from the former nutriment and provisionally stored in the liver in the form of glycogen has long since been exhausted. From which it must be inferred that the liver may generate sugar spontaneously, and is thus a focus of active production.

3. The blood of the left heart contains as much sugar as that of the right heart, which is an evident demonstration of the non-destruction of the sugar during the passage of the blood through the lungs in the vessels of the lesser circulation.

4. In the vessels of the general circulation the venous blood contains less sugar than the arterial blood, which shows that the capillaries of the general circulation are really a focus for the destruction of sugar.

The author terminates with the following observation: In comparing the blood of organs whose heat-producing activity in the physiological state is very unequal, it is always observed that the incessant destruction of glucose is much more active in that organ where organic combustion is greatest; in other words, the quantity of heat produced in the animal tissues, which is always proportional to the intensity of the combustion, is likewise proportional to the absorption of the glucose of the blood in the capillary system.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 23, 1887.

EDITORIAL.

MALARIA, AND AMERICAN SCIENTIFIC OBSERVATION.

IN his voluminous work on General Pathology, just issued from the press, Professor Klebs argues in a despairing sort of way in favor of the pathogenic importance of the bacillus malariæ discovered by himself and Tommasi-Crudeli in 1879. No notice is taken of the critical investigations of Sternberg in 1880, or of the more recent observations of Councilman and Abbott in 1884, and of Sternberg, Councilman, and Osler in 1886, which seem to negative the "discovery" of Klebs. Marchiafava and Celli, who described the plasmodium malariæ in 1883, and Laveran, who discovered the flagellate organisms (oscillaria malariæ), which he regards as the cause of malarial fevers, receive scant courtesy at his hands. Klebs does not only doubt the pathogenic nature of the plasmodium of Marchiafava and Celli, but even raises a question whether it is an organism at all. He intimates that "the apparent contractions" of these bodies may be due to contractions of the red contents of the blood-corpuscles. In view of the extensive observations of Councilman and Osler upon malarial blood, this opinion of the Zurich pathologist savors somewhat of undue arrogance. Regarding the development of the organism which is the cause of malarial fevers,—of course the bacillus malariæ,—Klebs believes that this takes place only in soil of medium moisture in which there is vegetable decomposition. Saturation, as well as complete drying out of the soil, prevents the development of the malarial organism. He denies that malaria is transmitted in drinking-water, contradicting in this assertion the experience and observation of Dr. Charles Smart, of the United States Army, of whom Professor Klebs appears likewise never to have heard. In fact, throughout his book, which is devoted entirely to the causes of disease, American investigators and observers are deliberately ignored. Whether this is due to ignorance of their work or to an arrogant assumption that it is worthless, the omission of all reference to it is discreditable to the Zurich professor. In the chapters on yellow fever, typhoid fever, diphtheria, and pneumonia, the same systematic suppression of the names of American scientists is practised. The names of Flint, Jacobi, Sternberg, Wood, Woodward, and many others who have contributed so much to the general fund of knowledge upon the etiology of infectious diseases, are conspicuous by their absence.

We are sure that no American author of standing would be guilty of such a lack of scientific courtesy as Professor Klebs has manifested in the pages of his work. American bacteriologists have for some years labored honestly and to good purpose in the field of pathology. If Professor Klebs is ignorant of the work done here, he is hardly competent to act as a safe guide to the modern student. If, on the other hand, he is familiar with American pathological research, his omission of all reference to it is worse than a confession of ignorance. His choice lies between the two horns of this dilemma.

HOT WEATHER HYGIENE.

A GREAT increase in the death-rate of our large cities has been noticed during the recent spell of hot weather. A temperature of a hundred degrees in the shade means a corresponding rise in the death-rate. Besides the mortality directly attributable to heat-stroke, the lethal influence of the excessive temperature is

shown by the number of deaths among individuals of feeble vitality, both young and old. Everything in life is relative, and a day that would be considered only moderately warm in the tropics is intolerable in Philadelphia or New York. Although we do not experience a temperature in this latitude of, say one hundred and twenty degrees in the shade, yet our habits of life make the even hundred quite as fatal in its effects. During the heated term it would be well to borrow the results of experience of travellers in hot countries. Parkes has demonstrated that soldiers can march better without a spirit ration than with; and Stanley considers it fatal even to use light malt-liquors or wines in equatorial Africa. The clothing should be adapted to the weather, light flannel being the most comfortable and wholesome. Exercise should be restricted, and work suspended during the middle of the day. Alcoholic drinks being excluded, ice-water and cold drinks may be sipped, but not drunk in excess. Large quantities of cold drinks not only cause gastric catarrh, and consequently impaired digestion, but also may cause death from shock. Such a case occurred in this city recently from drinking ice-water while overheated. A tropical diet of rice and fruits would be a good substitute for our usual heavier food, especially in the dietary of children. Crowd-poison seems to be especially developed in cities during hot weather, and hence the exodus to sea-shore and mountain has in its support both physic and fashion. The ancient temples of Æsculapius were always placed in the most salubrious localities, near healing springs, and not without reason:

"The murmur of a waterfall
A mile away,
The rustle when a robin lights
Upon a spray,
The lapping of a lowland stream
On dipping boughs,
The sounds of grazing from a herd
Of gentle cows,
The echo from a wooded hill
Of cuckoo's call,
The quiver through the meadow grass
At evening fall,—
Too subtle are these harmonies,
For pen or rule.
Such music is not understood
By any school;
But when the brain is overwrought,
It hath a spell,
Beyond all human skill and power,
To make it well."

MEDICAL SOCIETIES.

THE ability to take a prolonged summer vacation is not enjoyed by the mass of the profession, and is restricted to a select circle largely composed of those physicians whose peculiar and lucrative specialty enables them to devote a few months each year to "leading the fashion in the upper Engadine." Nevertheless, the advice of Sir Henry Holland is not unheeded. The proverb older than Æsop with regard to the bow that is always bent has its truth generally admitted, but, unfortunately, those who are most useful to their fellow-men find that their services are so constantly in demand that an opportunity even to temporarily lay aside their duties rarely appears. The meetings of the various medical societies, with their attractive social features, afford an illustration of the correspondence of duty and inclination which is hard to resist. Even a week's holiday spent in attending the annual session of the American Medical Association gives rest and recreation and fresh inspiration for the daily round of work. But a man who belongs to a number of societies may find himself so embarrassed with the riches that are offered him that he either cannot make up his mind which to attend, and so remains at home, or he may, in attempting to attend all, find his time so restricted as practically to deprive him of the real benefit of any. This is one of the evil results of the undue multiplication of societies.

COMMUNICATIONS FOR THE CONGRESS.

AMONG the meetings of the year the most noteworthy will be that of the International Medical Congress in Washington next September. To this every regular physician is entitled to come and enroll himself as a member and participate in all the proceedings. Such an opportunity to meet men whose reputation is world wide, and to listen to their voices, will surely be embraced by large numbers of the profession. As the programme will soon be completed for the Congress, all who expect to read papers should send a synopsis of their communications to the secretary of the appropriate Section without delay, or they may find themselves too late, especially since nearly every one who attends from abroad will probably bring a paper with him.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE JUBILEE CELEBRATION—JUBILEE HONORS FOR THE MEDICAL PROFESSION—RECENT RESEARCHES INTO THE ETIOLOGY OF SCARLET FEVER—THE EPIDEMIC OF RABIES—THE MEETING OF THE BRITISH MEDICAL ASSOCIATION IN DUBLIN—THE HEALTH OF THE CROWN PRINCE—SIEGESBECKIA IN TINEA—HOSPITAL SUNDAY.

THE celebration of the Jubilee of the Queen's reign has filled everybody's mind during the last fortnight, and nobody who saw London on June 21 will ever forget the spectacle then presented. It was less the procession itself, remarkable though that was, than the crowds which thronged the route which gave the occasion its peculiar and memorable character. The excellent behavior of the people is shown by the very small number of casualties. At a low estimate there must have been over a million people in the streets, yet not half a dozen people were seriously injured. One man, kicked in the chest by a trooper's horse, died in a few minutes, and it was found at the post-mortem examination that the manubrium sterni had been fractured, the pericardium torn, and the left ventricle ruptured at a point corresponding to the fracture in the sternum; another man fell off a coping and sustained a fracture of the base of the skull, from which he shortly died; another man suffered fracture of the femur, and seventeen persons had heat-stroke. The Volunteer Medical Staff Corps was out, under Surgeon-Major Norton, and assisted Mr. Mackellar, chief surgeon of the police, in manning the thirteen ambulance-stations established along the line of route. The assistance given was prompt and effective, but most of the patients were suffering with slight syncope or hysteria. At one ambulance-station a man who became faint was given a dose of brandy and allowed to sit in the ambulance-wagon. In a few minutes a regular epidemic of syncope set in, and the surgeons in charge had to make the differential diagnosis between syncope and malingering in a whole series of individuals whose envy had been excited by the sight of the dose of brandy and the shady and elevated seat.

The "Gazette" issued on Jubilee-Day was not a very interesting document to any class in the community. The medical profession came off no worse than others. Dr. Garrod, whose writings on gout have made his name familiar, received a knighthood; so did Professor MacLeod, the eminent Glasgow surgeon, and Dr. Aitken, long Professor at the Army Medical School at Netley, and author of a "Systematic Practice of Medicine" once very widely used in this country. Mr. John Simon, who, when he retired from the direction of the medical department of the sanitary service of the country, was made a C.B., now becomes Sir John Simon, K.C.B., and Dr. Arthur Mitchell, a Commissioner in Lunacy in Scotland, also receives the K.C.B. Dr. Ker Innes, of the medical staff of the army, Dr. William Mackenzie, of the Indian Medical Service, and Dr. James Jenkins, of the Royal Navy, are the recipients of the same distinction. Dr. J. A. Grant, of Ottawa, Canada, becomes a Knight-Commander of the Order of St. Michael and St. George (K.C.M.G.). These are all the important distinctions conferred. No peer, no Privy Councillor, not even a baronet!

In previous letters reference has been made to the researches conducted by Mr. W. H. Power and Dr. Klein, for the Local Government Board, into the supposed connection between scarlet fever and milk. Mr. Power traced an epidemic of scarlet fever to the milk obtained from a particular dairy near Hendon. The cows were found to have been suffering with a disease the local lesion of which was a vesicular eruption on the udders, ending in ulceration. Dr. Klein found that the disease could be produced in calves by inoculation of the discharges; he found a streptococcus in the discharges of the ulcers, and the same organism in the blood of cows suffering with the disease; inoculation with pure cultivations of the streptococcus pro-

duced a disease in calves which, in Dr. Klein's opinion, resembled human scarlet fever. The same streptococcus was found in the blood of human beings suffering with scarlet fever. As has been observed in a previous letter, the proof that the streptococcus is the virus of the vesicular disorder of cows appears to be pretty conclusive. The conclusion that it is also the virus of scarlet fever rests upon the three following observations: (1) the coincidence of the epizoötic in the dairy cows with the epidemic of scarlet fever; (2) the resemblance between the pathological appearances produced in the kidneys and skin (?) in calves by inoculation with the virus of the epizoötic to the lesions of scarlet fever; and (3) the discovery of the same organism in the blood of the calves and of persons suffering with scarlet fever. It ought to be added that Dr. Klein found the same streptococcus in some tinned milk to the use of which an epidemic of scarlet fever had been traced by Dr. Klein. Objections to Dr. Klein's theory must follow one of two lines: (1) It may be contended that the epidemic had nothing to do with the state of health of the dairy cows, but is to be attributed to contamination of the milk from some unrecognized local source; or (2) it may be held that the epidemic was due to some epizoötic disease of the cow, but not to the particular vesicular disease identified by Dr. Klein. The first objection is that maintained by the veterinary authorities, headed by Professors Brown and Axe, who say that the vesicular disease of the udders is well known to veterinary surgeons and extremely common in dairy-farms, whereas scarlet fever has never before been traced to the milk-supply. Professor Axe believes that he has ascertained that the cows which introduced the disease into the Hendon dairy came from a dairy from which a number of other cows were sold to go to dairy-farms in other parts of the country without any corresponding outbreaks of scarlet fever following in those localities. The second objection has been raised by a research conducted by Mr. Edington for Professor Chiene and Dr. Jamieson, of Edinburgh. This research, which was published in the *British Medical Journal*, was undertaken with the view of testing the specific infectivity of the desquamation of scarlet fever. Two organisms especially attracted attention: one was a diplococcus (to which the name *diplococcus scarlatinæ sanguinis* was provisionally applied); it was found in forty-five per cent. of the tubes inoculated from the desquamation, and in thirty per cent. of those inoculated with the blood of cases of scarlet fever; the other was a bacillus (to which the term *bacillus scarlatinæ* was provisionally applied). It occurred in every tube inoculated with the desquamation after the termination of the third week, and in every tube inoculated with blood taken before the third day of the fever. Inoculation of the diplococcus gave negative results. The bacillus, inoculated into rabbits and guinea-pigs, produced fever with local erythema followed by desquamation. In a calf, inoculation was followed by vomiting and pyrexia, and by death in a few hours. It is a pity that Dr. Edington did not inoculate a calf with blood from a case of scarlet fever, in order to compare the result with those obtained from the inoculation of his bacillus, of Dr. Klein's streptococcus, and of the Hendon udder-ulcers. At present the only safe course is to reserve judgment on the main question, while acknowledging that Dr. Edington has made an important contribution to our knowledge of the pathology of scarlet fever.

The epidemic of rabies and hydrophobia which commenced in the spring of 1885 seems to have come to an end, so far as London is concerned, in the early autumn of 1886. No case of hydrophobia was returned in London from September, 1886, to April, 1887, both inclusive. One death occurred in May last; but there is no reason to suppose that another epidemic is commencing, although the police regulations have been relaxed in London. In other parts of the country, where cases of rabies have been increasing in number, it has been necessary to make the regulations more stringent. It is one of the disadvantages of the Anglo-Saxon love of decentralization that local authorities alone have the right of enforcing orders of this nature, and that it is practically impossible to get any considerable number to act in concert. It thus happens that, while we are stamping out rabies in London, it is allowed to increase in the North, and *vice versa*. The London epidemic of hydrophobia reached its maximum in October and November, 1885; the stringent police order came into force early in November; all dogs were required to be muzzled or kept under control, and ownerless dogs were condemned to death. An enormous number of stray curs were taken to the Home for Lost Dogs, and there put to a painless death.

The immediate effect of the police order was not very marked. There was, it is true, a sudden drop in the number of cases in December; but, remembering the incubation-period of hydrophobia is at least six weeks, it would not be safe to attribute the decline to the order, the more as three deaths occurred in January, and three more in March. During the spring and early summer months the average is generally low, and it is not until we look at the returns for the last five months of 1886 that we can recognize that the epidemic had been extinguished. Altogether, thirty-five persons had died of the disease during the epidemic, and of these, eighteen, or more than half, succumbed during the last five months of 1885; while during the same portion of 1886 not a single death from the

disease occurred. This is the more remarkable as September, October, and November are believed to be the months of greatest prevalence of hydrophobia in this country.

Table showing the Number of Deaths in each Month from Hydrophobia during the Epidemic of 1885–1886. (*London only.*)

	1885.	1886.	1887
January	1	3	0
February	0	0	0
March	0	3	0
April	3	1	0
May	2	0	1
June	1	0	
July	1	1	
August	3	2	
September	4	0	
October	5	0	
November	5	0	
December	1	0	

The report of the commission appointed to investigate M. Pasteur's method will be presented to Parliament on June 27. It is understood to be very favorable to his claims.

The arrangements for the meeting of the British Medical Association in Dublin on August 2, 3, 4, and 5 are now nearly complete. The address by the President, Dr. John T. Banks, Regius Professor of Physic in the University of Dublin, will be delivered on the afternoon of the first day; but previously members will have had the opportunity of listening to two sermons: one in the morning, in the Catholic Pro-Cathedral, by the Rev. Martial Klein, once a surgeon in the French army, but now a member of the Society of Jesus and Professor of Biology in University College, Dublin; the other in the afternoon, by the Bishop of Meath, an eloquent and learned prelate of the Protestant Church of Ireland. The chief discussion in the Section of Medicine will be on "Aphasia," introduced by Dr. Charlton Bastian, F.R.S., the most profound and original of modern writers on that most interesting topic. The Section of Surgery will discuss the "Radical Cure of Hernia," and already four papers and fourteen speeches are promised on that subject alone. Dr. Playfair will introduce the question of the "Prevention of Puerperal Fever" to the Obstetric Section, and Dr. Halliday Croom that of "Displacements of the Uterus," two topics generally provocative of much discussion. The special subject in the Section of Pharmacology and Therapeutics is the "Therapeutics of the Uric-Acid Diathesis." No less than eighteen surgeons, including Dr. Argyll Robertson and Mr. Nettleship, have signified their intention of discussing the subject of the "Etiology and Treatment of Convergent Concomitant Strabismus," which will be introduced to the Ophthalmological Section by Mr. Simeon Snell, of Sheffield. Dr. Landolt, of Paris, and Dr. Uhthoff, of Berlin, are coming over to read papers in this Section. Dr. Apostoli, of Paris, has promised to read a paper on the "Electric Treatment of Fibroid Tumors of the Uterus," giving full statistics of all the cases treated from July, 1882, to July, 1887; Dr. Kocher, of Berne, will read a paper on "Cachexia Strumipriva and Myxœdema;" Sir Spencer Wells will compare Porro's operation with Cæsarean Section; and Dr. Benjamin Ward Richardson will discourse of his favorite subject, "Alcoholism." There will thus be no lack of subjects of the greatest scientific and practical importance for discussion. There will also be more than the usual list of social festivities. The University of Dublin has offered every facility to the Association, and, in connection with the meeting, it intends to confer the honorary degree of M.D. on Professor Gairdner, of Glasgow, who delivers the Address in Medicine; on Dr. Waters, of Chester, who has been so long identified with the political activity of the Association; on Sir James Paget, Sir Spencer Wells, and Sir John Semon. Prince Albert Victor (the eldest son of the Prince of Wales) and the Lord-Lieutenant are to receive honorary degrees on the same day.

Dr. Morell Mackenzie has succeeded in removing the greater part of the growth which has interfered with the health of the Crown Prince of Germany. Professor Virchow has, after careful examination of the fragments, declared the affection to be *pachydermia verrucosa*, and non-malignant. It has required, however, all his authority to silence the objections of those who maintained that the tumor was cancerous and advised the removal of half the larynx. The Crown Prince is now staying in an hotel at Norwood, close to the Crystal Palace, a locality which has a great reputation, probably quite undeserved, for its salubrious climate. He is seen frequently by Dr. Morell Mackenzie, and Dr. Norris Wolfenden has gone to live at Norwood in order to carry out Dr. Mackenzie's treatment. He has the intention to attempt the removal of the small remainder of the growth at an early date. The Prince is quite hoarse, but otherwise in good health.

Dr. J. Hutchison, of Glasgow, has been using a tincture of Siegesbeckia orientalis in ringworm with success. The plant belongs to the natural order Compositæ, and has a local reputation in the Mauritius as a cure for all the ills that flesh is heir to. The rest of the world will perhaps be content if other observers find it as efficacious against tinea circinata, tinea tonsurans, and tinea sycosis.

June 19 was Hospital Sunday in London this year. The amount collected is not yet known, but, so far as at present appears, the total is not likely to be unusually large. For the last two years special public meetings have been held in various parts of London in the week preceding Hospital Sunday, in order

to arouse greater public interest in the fund. The managers of the hospitals situated in each locality have been asked this year to arrange for these meetings, and to ask the friends of each hospital to take part in the proceedings. This request has not met with unanimous compliance: certain hospitals have refused point-blank to help, and others were lukewarm. The honorary secretaries of the fund thought fit to denounce these hospitals at a meeting, and made use of threats which were interpreted to mean that the sum voted to these recalcitrant institutions would be diminished or entirely stopped. Sir Sydney Waterlow, the chairman of the committee of distribution, after a rather acrimonious correspondence had gone on for more than a week in *The Times*, repudiated the threat, but the mischief has been done. Mr. John Biddulph Martin, chairman of the Economic Section of the British Association, and the treasurer of Charing Cross Hospital, has printed a memorandum stating the reasons which have led the hospitals to decline to assist in getting up the local meetings. Shortly stated, there are two,—namely, that to do so would interfere with the established rule of these hospitals to make special efforts to enlist the special sympathy and support of persons resident in their own localities, and that the Hospital Sunday Fund was started to add to the resources of the hospitals by tapping new sources of supply, and not to cut into the existing sources of revenue. Perhaps there is yet a stronger reason, for injudicious friends of Hospital Sunday Fund have maintained that we want a central board controlling the finances and administration of all hospitals. Such centralizing proposals, as I have remarked elsewhere in this letter, are always detested in this country. *Hinc illæ lachrymæ.*

The creation of a studentship in pathology, under the provisions of the trust fund left by the late Mr. John Lucas Walker, is the first instance of the endowment of pathological research. The first "student," Dr. William Hunter, of Edinburgh, has just been named, and Cambridge may be congratulated on having found so promising a pathologist, or, as the late Dr. Walter Moxen would have had us say, "pathonomist," for the first holder of the studentship.

Fifteen new Fellows of the Royal Society were elected on June 9. Four are members of the medical profession, but only two of these owe this crowning distinction to their medical achievements. These are Dr. J. Theodore Cash, recently appointed professor of therapeutics in the University of Aberdeen, and Dr. W. R. Gowers, the well-known neurologist. The others are Surgeon Major George King, known as an Indian botanist, and Sir John Kirk, K.C.M.G., of Zanzibar, the friend of Livingston and many other African explorers. DAWSON WILLIAMS.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THE Thirty-Eighth Session of the Medical Society of the State of Pennsylvania was held at Bedford Springs, June 29 and 30, and July 1, 1887. About two hundred delegates and permanent members were present.

The Society was called to order by the President, R. Davis, M.D., of Wilkesbarre, at 9 A.M., June 29, and the proceedings were formally opened by the Rev. E. N. Kremer with prayer.

The address of welcome was delivered by S. H. Gump, M.D., Chairman of the Committee on Arrangements. The programme presented by the committee was approved and adopted.

Dr. Edward Jackson, Chairman of Committee on Medical Legislation, reported progress. The bill read at the last meeting of the Society had failed to pass the Legislature, and for the present nothing more can be done, but correspondence had been kept up with the county medical societies, many of which had agreed to appoint a committee to agitate the subject and advance public opinion upon the propriety of having such a law. In conclusion, he submitted a formal resolution requesting each county medical society to consider the subject of establishing a State board of examiners, and to appoint a committee to co-operate with the State Medical Society. This was adopted.

The report of the Publication Committee was criticised. The resolution offered at the last meeting by Dr. Packard restricting the publication of scientfic papers to their titles in the Proceedings was not adopted, but a resolution prevailed to exclude unnecessary matter from the annual volume.

The resolution offered at the last meeting by Dr. W. H. Parish dividing the scientific work of the meeting so that the surgical, medical, and obstetrical addresses and communications should occupy in rotation the three days of the session, each day to be devoted to one of these three branches of medicine, was carried after considerable discussion. [This resolution was reconsidered and lost on the last day of the session. It was resolved that the Addresses in Medicine, Surgery, and Obstetrics should be delivered in rotation at successive meetings, and that the Address in Hygiene be given a place early in the session.]

In the afternoon session a number of interesting papers were presented. J. B. Murdoch, of Pittsburg, delivered the Address in Surgery. Among recent advances in this department made possible by improvements in treating wounds, the operation of amputation through the foot, known as Chopart's operation, deserves special consideration. By this method sufficient material is saved to

give a useful foot. The lecturer reported a case in which this operation was performed on both feet, and the patient was afterwards able to walk erect with only one cane, and even for a short distance without any assistance or support. Plaster casts were exhibited showing the successful result of this operation.

The Address in Ophthalmology was delivered by Charles S. Turnbull, M.D., of Philadelphia. Charles W. Dulles, M.D., of Philadelphia, read a report on hydrophobia for 1886, in which he criticised the Pasteurian method of treatment on account of its empirical and unscientific character. Until the pathology of the various conditions accompanied by so-called hydrophobic symptoms is more clearly understood, the foundation for a really scientific therapeutics cannot be laid.

John V. Shoemaker read a paper advocating the "Use of Medicated Plasters in the Treatment of Diseases of the Skin," and exhibited some pharmaceutical preparations of this character.

An interesting specimen of a testicle removed from the right labium majus of a married woman (transverse hermaphrodite), aged 40 years, was demonstrated by Howard A. Kelly, M.D., of Philadelphia.

In the evening the Society, as the guest of the Bedford County Medical Society, enjoyed a reception and banquet at the Bedford Springs Hotel, at which numerous short addresses were made.

On the second day the proceedings were opened by prayer, and the Address in Medicine was delivered by Frank Woodbury, M.D.* Traill Green, M.D., of Easton, read a paper on "Palatable Therapeutics," in which he contrasted prescriptions and methods of fifty years ago with those in vogue to-day. He praised very highly modern pharmacy, which has given us alkaloids and pleasant medicines in place of the nauseating compounds formerly used, and he declared that at the present time diseases are treated in a much milder way than in the days of heroic dosing. He did not think that a physician need resort to any unpalatable remedy in order to treat disease successfully.

This paper gave rise to an animated discussion. Professor Remington, of the Philadelphia College of Pharmacy, spoke of the administration of quinine suspended in the syrup or elixir of glycyrrhizin, and advised that no acid should be added in writing the prescription. The quinine should not be dissolved, but merely suspended in the mixture, or it may be added in powder to the solution of glycyrrhizin at the time of administering the remedy.

George Stubbs, M.D., of Philadelphia, read a paper on "Iodoform in Surgery," advocating the use of a chemically pure iodoform as a perfectly antiseptic dressing for wounds.

Papers on the treatment of phthisis by new methods were read by William F. Waugh, M.D.,† S. Solis Cohen, M.D., and Thomas J. Mays, M.D., in which the first opposed the Bergeon method, and the latter two gave it a qualified endorsement, not as a bactericidal treatment, but as a means of relieving some of the symptoms.

John H. Packard, M.D., of Philadelphia, reported a case of stricture, probably malignant, of the colon, for which he successfully performed right inguinal colotomy, after the usual operation in the left loin had failed to reveal the colon. The patient is now living; all the fæces are discharged through the artificial anus, but there is no offensive odor about her person, so that her condition would not be suspected by those around her.

In the afternoon, Dr. S. Wolfe, of Skippack, Pennsylvania, read the Address in Obstetrics, advocating antiseptic precautions during labor, and the use of washes after confinement as a means of preventing or treating puerperal septicæmia.

This paper was discussed by Drs. Montgomery, Parish, and others.

William C. Bane, M.D., of Washington County, read a paper describing two cases of nystagmus associated with astigmatism, one myopic and the other hypermetropic. Great improvement was observed after properly correcting the errors of refraction.

Edward Jackson, M.D., read a paper entitled, "When and How to use Mydriatics."

The Annual Address of the President (see page 685) was delivered at the evening session, according to custom.

At the opening of the third day's morning session, Dr. J. D. Thomas, of Pittsburg, read the Address in Hygiene, in which the necessity of disinfecting discharges from cases of all zymotic diseases was insisted upon. The methods of disposal of sewage were considered at length, and the importance of a system by well-laid sewers in all large communities was emphasized. A vigorous discussion following this address showed the increasing interest of the profession in sanitary subjects.

The following papers were read by title only: Remarks on the Value of Diet in the Treatment of Chronic Joint- and Spine-Disease, by A. Sidney Roberts, M.D., of Philadelphia; Plastic Surgery of the Vagina, by C. M. Wilson, M.D., of Philadelphia; Address in Mental Disorders, by J. Z. Gerhard, M.D., of Harrisburg; A Case of Ovariotomy followed by Herniotomy four days after, with Recovery of Patient, by John C. Da Costa, M.D., of Philadelphia; Some Considerations upon the Use of Expectorants in Pulmonary Diseases, by J. C. Lange, M.D., of Pittsburg; Ovarian Tumors complicating Pregnancy,‡ by E. E. Montgomery, M.D., of Philadelphia; Supra-Pubic Lithotomy, by Charles W. Dulles,

* This will appear in the next issue of the *Times*.

† Dr. Waugh's paper will shortly appear in these pages.

‡ See page 693, *ante*.

M.D., of Philadelphia; Remarks on Vomiting, Physiological and Clinical, by J. H. Musser, M.D., of Philadelphia.

In the business meeting the Society voted an appropriation of one thousand dollars to the Entertainment Committee of the Ninth International Congress, and three hundred dollars (one hundred annually for three years) to the Rush Monument Fund.

The following officers were elected for the next meeting:

President.—R. J. Levis, M.D., Philadelphia.

Vice-Presidents.—J. T. Ullom, M.D., Greene County; J. L. Seybert, M.D., Centre County; W. F. Hughes, M.D., Bedford County; A. M. Cooper, M.D., Bucks County.

Permanent Secretary.—William B. Atkinson, M.D., Philadelphia.

Recording Secretary.—Charles W. Dulles, M.D., Philadelphia.

Corresponding Secretary.—J. H. Musser, M.D., Philadelphia.

Treasurer.—O. H. Allis, M.D., Philadelphia.

Chairman of Committee on Publication.—W. H. Parish, M.D., Philadelphia.

The next meeting will be held in Philadelphia on the first Tuesday in June, 1888. Dr. John H. Packard is Chairman of the Committee on Arrangements.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

MEETING OF MAY 26, 27, and 28, 1887.

(Continued from page 682.)

Third Day, Morning Session.

CONSTITUTIONAL CAUSES OF THROAT-AFFECTIONS. BY S. W. LANGMAID, M.D., OF BOSTON.

THE writer suggested that the most interesting lesson to be drawn from the observation of the lesions in throat-trouble is that there is some underlying cause, which may be external or intrinsic. Our attention has been directed too much to the local condition and to atmospheric influences. Why atmospheric conditions are active at one time and not at another is a matter worthy of consideration. One of the most intractable diseases which we have to treat is chronic recurring coryza. Sometimes destruction of the mucous membrane of the nose is sufficient; but, as a rule, the treatment must take in all the circumstances of the life of the sufferer. A sense of a lump in the throat, so often complained of, is often an indication of an overloaded colon, and more good is done by a dose of castor oil than by local treatment. The so-called clergyman's sore throat, or follicular laryngitis, has its origin not in the necessary use of the throat, but the sedentary life, with errors in diet and other conditions, plays an important part. Throat-trouble is sometimes a rheumatic or gouty manifestation, and treatment has to be directed to this condition. Local treatment in many throat-troubles is of the nature of repair; constitutional and hygienic treatment must be in the direction of a renewal of the normal processes. Swelling and congestion of the mucous membrane, hypertrophy of the tonsil, elongation of the uvula, etc., must be regarded as symptoms, and the symptoms will not be banished unless the underlying constitutional abnormality be removed.

In the discussion, Drs. Glasgow and Cohen agreed with the reader of the paper.

Dr. Delavan said that in this country we pay too little attention to the hygienic surroundings which are employed at the various spas abroad. This method of treatment is very beneficial in cases of interference with the portal circulation and in gouty diathesis. He had found the salicylates of great service in some of these cases of throat-trouble. Habitual constipation usually accompanies chronic disease of the pharynx. I have used in these cases the officinal pill of iron and aloes, directing that one be taken at night.

The following papers were read by title:

"Affections of the Crico-Arytenoid Articulation," by George W. Major, M.D., of Montreal.

"Cancer of the Larynx," by Hosmer A. Johnson, M.D., of Chicago.

"A Case of Recurring Laryngitis Hemorrhagica," by C. E. Bean, M.D., of St. Paul.

The report of

A CASE OF STENOSIS OF THE LARYNX TREATED BY DIVULSION AND SYSTEMATIC DILATATION

was contributed by Morris J. Asch, M.D., of New York.

Miss K. enjoyed good health up to about the age of 27. She then had some pulmonary disorder the exact nature of which could not be ascertained. In 1884 she had some wheezing in breathing, with slight cough. These symptoms increased in intensity gradually, and in May, 1885, the patient came under the observation of the author. There was at this time great dyspnœa, which was increased by lying down. Examination of the throat showed no abnormality in the larynx or above the cords. Below the cords there were two white swellings united by a membrane posteriorly. The opening of the larynx was diminished to one-third of the normal size. The membrane was cut and divulsion performed. This caused great improvement. Later metallic sounds were used daily, and the forceps once a week. She grew much better, and ceased attending. In September she again returned, with the difficulty of breathing as great as before. This was the result of acute inflammation of the larynx. Under

the use of steam and cold compresses the swelling subsided. O'Dwyer's tubes were tried, but they at once produced spasm and were coughed out. Schroeder's hard-rubber tubes were then used, and within three months the cure was perfect. All the symptoms have now disappeared. There was no history of syphilis and no history of previous inflammation. The affection was evidently the result of subcordal hypertrophic laryngitis.

Dr. J. Solis Cohen said that his experience in stenosis of the larynx had been limited. In one case, reported twenty years ago, he had removed a morbid growth by thyrotomy after it had been destroyed by the internal use of the galvano-cautery, which was probably the first use of the galvano-cautery for this purpose in the United States. The growth had been examined by several microscopists, who pronounced it epithelioma; but this was evidently an error, as the patient still lives. On this supposition I separated the thyroid cartilage and removed the tumor with one vocal cord. Preliminary tracheotomy had been performed ten days previously. The operation was followed by adhesion of the vocal cord to the tissues of the opposite side. He then had devised an instrument to cut this adhesion. He never had had the courage to attempt dilatation of the larynx without previous tracheotomy. It is better to perform tracheotomy so as to have nothing to interfere with the breathing, and then pursue the most active measures for the relief of the stenosis. When the operation is performed with antiseptic precautions the tracheotomy-wound heals up in a very short time. He had seen it close within four or five days of the operation. The danger from the operation is less than the risk of injury from the other methods of treatment.

Dr. E. C. Morgan recently had had under treatment a case of laryngeal stenosis. During a period of eight or ten months he was enabled to control this by the administration of iodide of potassium and by local applications of iodo-glycerin to the larynx. Finally, the disease advanced so far that on several occasions he advised tracheotomy, to be followed by dilatation. The patient postponed the operation, although warned of his danger. He had at times suffocative spells at night, and finally succumbed in one of these spasmodic attacks. If tracheotomy had been allowed and dilatation performed, that man would probably have been alive to-day.

Dr. Delavan: The various forms of dilators used in these cases are likely to be replaced by O'Dwyer's tubes. This method has a most promising future before it. The tube can be left in for a length of time and respiration go on uninterruptedly.

A paper was presented by D. Bryson Delavan on "The Etiology of Deflections of the Nasal Septum."

Dr. S. W. Langmaid read the next paper, on

FOREIGN BODY IN THE LARYNX.

The patient came under observation three months after swallowing a pin about two inches in length, which had lodged in the throat. Immediately after the accident an unsuccessful effort had been made to remove it with the bristle-probang. At the time that she came under the speaker's notice there were ulcerations of the larynx, which were relieved by treatment. Two years later the patient again presented herself, when an examination showed the pin, which had emerged from the ventricular band with the head down. It was with some difficulty removed.

A PECULIAR APPEARANCE IN THE PHARYNX.

Dr. J. Solis Cohen stated that in several instances he had seen, on examining the pharynx, what appeared to be the belly of a muscle above the Eustachian tube, and that from this there extended to the fornix of the pharynx what looked like a tendon. This he had seen on both sides. He asked whether or not any of the other members had observed the same appearance.

The report of a case of

RECURRENT NASO-PHARYNGEAL TUMOR; CURE BY ELECTROLYSIS,

was read by Dr. Rufus P. Lincoln, of New York.

The patient presented himself in April, 1886. A growth had been removed from the posterior nares by another physician one year previously. It returned, and the operation was repeated six months later. When the patient came under observation he was unable to breathe through the left nostril. On examination, a large growth was found occupying the left half of the posterior nares, and it was decided to treat this by electrolysis. On June 3, two needles connected with the negative pole of the battery were introduced through the anterior nares into the growth, while the positive pole terminated in two large sponge-electrodes which were applied to the front and back of the chest. In all sixteen applications were made, at intervals of three or four days. This caused an entire disappearance of the growth. The immediate effect of the electrolysis was to cause distention and a change in the color of the growth, but these passed off in the course of twenty-four hours. There is up to the present time no evidence of return of the growth.

DISCUSSION.

Dr. F. H. Hooper: In October, 1881, a youth presented himself with a tumor extending from the tip of the right nostril into the naso-pharyngeal cavity. There had been a great deal of hemorrhage, and the patient was in a bad condition. He was sent into the hospital and operated on by Dr. J. C. Warren with the galvano-cautery snare, and the whole

mass removed in one piece. From that time to this the patient has been constantly under treatment. The tumor has been growing, and from time to time has been snared off. The tumor has been pronounced to be a most malignant form of myxosarcoma, but the general health is excellent. He proposes to try the effect of electrolysis upon the growth.

Dr. D. Bryson Delavan said that during the past fifteen years he had seen a number of these patients operated upon, and recalled many cases in which the result was disastrous. Although there have been successful cases, none had come under his observation. The great point is in the early diagnosis. If taken in time, even if it cannot be cured, it can be kept in check as a rule. After the age of twenty-five years it has been stated that these tumors have a tendency to stop growing, so that if kept in check until this age they may entirely disappear. It seems to him that the galvano-cautery exercises a modifying influence on the tissues which remain which cannot be caused by the knife.

TWO UNIQUE CASES OF CONGENITAL OCCLUSION OF THE ANTERIOR NARES. BY W. C. JARVIS, M.D., OF NEW YORK.

Complete congenital occlusion of the anterior nares is rare, and the author has been unable to discover any cases in searching the literature of the subject. The first case was a young man 18 years of age, with complete closure of both nostrils. Inspection showed on each side within the anterior nares a cup-shaped depression of white, glistening membrane. On the left side a small hole was discovered. The operation was performed in April, 1886. The burrs devised by the speaker, connected with an engine, were used to cut through the cartilaginous occlusion. This was accomplished in a few minutes, and the air passed freely through the nostril. At a subsequent operation the right nostril was opened. In April, 1887, the opening in the right nostril had become contracted, and had to be reopened. In a second case, in which the anterior nostrils were occluded by an osseous growth, the operation was performed in the same manner as in the previous case, with success.

A COMPARATIVE STUDY OF SOME OF THE METHODS OF TREATMENT BEST ADAPTED TO THE RELIEF OF OCCLUSION OF THE POSTERIOR NARES. BY DR. ALEXANDER W. MACCOY, OF PHILADELPHIA.

The paper was restricted to the consideration of occlusion due to enlargement of the soft parts. He had never seen occlusion of the posterior nares due to osseous growth. He referred to the methods used in the treatment of occlusion of the posterior nares, and highly recommended the use of chromic acid fused on the end of a probe, the end of which is covered with a tube, which is withdrawn when the probe has reached the desired position. This is followed by the use of an antagonistic solution. He had found this better than the use of the galvano-cautery. After using cocaine he had not been able to use the cold-wire snare in these cases, on account of the contraction caused by the drug. He had also found difficulty in using the needles recommended by Dr. Jarvis. The chief object of the paper was to call attention to the superiority of chromic acid used in this way over the other methods of treatment which had been recommended. He did not recommend the use of the acid either in crystal or in solution, for then it was not easy to limit the application to the desired point.

DISCUSSION.

Dr. W. C. Jarvis never uses cocaine as a preliminary measure when he intends to remove posterior hypertrophies. He first includes the hypertrophies in the loop and tightens the wire before applying the cocaine spray. The tissue included in the loop cannot be affected by the contraction produced by the drug. We thus have the advantages of the anæsthetic without its disadvantages. It has been pretty generally recognized that chromic acid has many disadvantages. It may produce serious symptoms. The snare will accomplish in a few minutes what chromic acid requires considerable time to do.

Dr. C. C. Rice agreed in the main with the author of the paper. The turbinate bodies are difficult to penetrate with the needles, and there are many cases in which it is difficult to apply the loop posteriorly. He had not found any special disadvantages in the use of chromic acid.

Dr. D. Bryson Delavan formerly used chromic acid, but then gave it up. Lately he had again tested it, selecting for this purpose five patients, three of whom were physicians. He added enough water to the crystals to make them deliquesce, and then applied it with a cotton-wrapped probe, the excess of acid having been removed. He had also used it by fusing it on a probe. In all these cases there was more reaction than follows the use of the cautery or the snare, and all the patients preferred the cautery to the chromic acid.

A paper on "Plaster-of-Paris Dressing for Fracture of the Nose," by J. W. Robertson, M.D., of Detroit, was read by title.

Dr. De Blois, of Boston, exhibited a plaster splint which he had employed with advantage in a case of fracture of the nose. The splint consisted simply of a plaster cast into which a piece of roller bandage had been incorporated. This was applied over the nose and held in position by the strips of bandage.

Dr. J. O. Roe, of Rochester, exhibited a saw run by an electric motor.

The Association held an executive session,

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during which the following business was transacted:

The report of the Committee on the Congress of American Physicians and Surgeons was presented and adopted.

The following officers were elected for the ensuing year:

President. — Dr. R. P. Lincoln, of New York.

Vice-Presidents.—Drs. J. N. Mackenzie, of Baltimore, and S. W. Langmaid, of Boston.

Secretary and Treasurer.—Dr. D. Bryson Delavan, of New York.

Librarian.—Dr. T. R. French, of Brooklyn.

Council.—Drs. Frank Donaldson, of Baltimore, J. Solis Cohen, of Philadelphia, F. H. Hooper, of Boston, and E. C. Morgan, of Washington.

The following were elected Corresponding Fellows: Dr. A. Gouguenheim, of Paris, and J. Moure, of Bordeaux.

Dr. A. Jacobi, of New York, was elected Honorary Fellow.

REVIEWS AND BOOK NOTICES.

A Text-Book of Pathological Anatomy and Pathogenesis. By Ernst Ziegler, Professor of Pathological Anatomy in the University of Tübingen. Translated and Edited for English Students by Donald MacAlister, M.A., M.D. Three parts complete in one volume. New York, William Wood & Co., 1887. 8vo, cloth, pp. 1091.

The translation of the second German edition of Ziegler's text-book of pathological anatomy by Dr. Donald MacAlister has placed a valuable work of reference in the hands of English-speaking students. Of the twelve parts into which the book is divided, seven are devoted to general, and five to special, pathological anatomy. The annotations made by the editor give additional value to a work which is encyclopædic in its completeness. The pages are illustrated by numerous cuts, and the type is clear and readable. Altogether, it is a most satisfactory book for students.

Transactions of the New York State Medical Association for the Year 1886. Volume III. Edited for the Association by Alfred Ludlow Carroll, M.D.

This handsome volume of transactions is embellished with three portraits of distinguished deceased members: Austin Flint, M.D., Frank Hastings Hamilton, M.D., and John P. Gray, M.D. Among the important papers are the President's Annual Address, by E. M. Moore, M.D., of Rochester, on "Subluxation of the Radius from Extension in Young Children;" "The Discussion on Shot Wounds of the Intestines," introduced by E. S. Tremaine, M.D.; "On Pulmonary Tuberculosis," introduced by H. D. Didama, M.D.; and "On Eclampsia," introduced by W. T. Lusk, M.D. A number of communications upon other subjects also appear, but the chief interest of the meeting was given to the consideration of the important questions just named.

NEW REMEDIES AND CLINICAL NOTES.

A New Form of Inflammation of the Lips and Mouth.—In a paper read by Jonathan Hutchinson, F.R.S, LL.D., before the Royal Medical and Chirurgical Society of London, on a form of inflammation of the lips and mouth which sometimes ends fatally, and is usually attended by some disease of the skin, the distinguished author discussed his subject most thoroughly. The disease is one which it is believed has not been previously recognized, in which the superficial ulcerations occur in the lips and in various parts of the mouth, followed sooner or later by some form of skin-disease and tending to end fatally. The form of skin-disease may vary, but the hands and feet are the parts usually affected, and the nails are especially prone to suffer. In some instances the eruption may consist of bullæ which are followed by free papillary outgrowths. The patients attacked are usually in middle life or in early senile periods. No special antecedents can be alleged as the probable cause of the malady. Unless checked by treatment, the disease appears to run its course in about six months, producing death by exhaustion. There seems reason to believe that opium given in repeated doses will cure it. All the best-marked cases as yet observed have occurred in males, but in several milder ones the patients were women. Of the most characteristic, two were master-tanners, one a farmer, one a clergyman, and one a gentleman of no occupation; all these resided in the country. Careful inquiry has failed to support the suspicion that the disease might perhaps be due to contagion from animals. Of these five cases, two ended fatally. The patients who died were those first observed, and since the discovery of the efficacy of opium no case has ended in death. The observation of the value of opium was simultaneously made by the President of the Society, Mr. Pollock, and by the author, two different patients being at the same time under their separate treatment and recovering under this drug. Since then every case has yielded if the opium were sufficiently pushed. In one, however, the disease did not yield quickly, and for more than a month seemed likely to terminate fatally.

As regards permanency of cure, in one case the patient is known to have been quite

well four years after his recovery, in another there is reason to believe that such is the fact, and in the third a period of two years has elapsed. In two of the milder cases occurring in younger patients, the disease has repeatedly relapsed.

A great variety of remedies had been tried without benefit before opium was used. In no single instance has there appeared to be any tendency to spontaneous improvement.

In all the cases the inflammation of the lips and mouth took definite precedence of the skin-symptoms, and in some the latter were very slight. It is not known that any case has as yet been obtained among the poorer classes of society.

The author desires to abstain for the present from expressing any definite opinion as to the causes or nature of the malady. He would, however, venture to suggest that it is allied to other forms of skin-disease in disturbed health and occurring in early senile periods, such as certain peculiar varieties of psoriasis, pemphigus, lichen planus, and pityriasis rubra. In confirmation of this suggestion, and as an appendix to this paper, a case is narrated (with a portrait in illustration) in which an elderly lady had a kind of spreading eczema-psoriasis of the hands and scalp. She lost all her nails and hair, and was rapidly failing in health despite various methods of treatment, but finally recovered quickly and completely under opium. Her case does not belong to the group described in the paper, because she never at any time had buccal disease.

Dermatitis Gangrænosa Infantum.—H. Radcliffe Crocker, M.D., read a paper before the Royal Medical and Chirurgical Society, June 14, 1887, on this subject. Four groups of cases are described. In the first there was no evidence of varicella antecedent to the gangrenous or ulcerating eruptions, and in most it was distinctly negatived. In the second group are cases in which varicella preceded the sloughs or ulcers, which either developed immediately upon the varicella pustule or occurred as a sequela beginning in independent lesions. In the third group vaccination was the immediate antecedent. In the fourth group are placed certain cases of local gangrene resembling cancrum oris; but the individual lesions began in exactly the same way as the independent eruption which followed varicella, and there was a tendency to generalization, or at all events to extension beyond the region in which it started, in some of the cases. A general account of the disease is drawn up from an analysis of the preceding and other cases, and it is shown there is great difference in the severity of the eruption. In some the gangrenous patches were so numerous and extensive as to lead to the death of the patient in a few days, while on the other hand are cases of so mild a character that there were only superficially ulcerating pustules which came out in crops, thus protracting the disease as a whole for a considerable time, and usually accompanied by an intense pruritus. These milder cases appear to correspond with Mr. Hutchinson's varicella prurigo. Between the two extremes are cases of all grades of severity.

Comparison is made between the local and general gangrenous eruptions, and, among other things in common, it is shown that both attack girls more than boys, and occur about the same ages.

The conclusions arrived at are that the gangrenous eruptions are pathological accidents, so to speak, which in young children, especially when of tubercular constitution, might supervene upon any pustular eruption, although no doubt such a condition is much more common after varicella. Secondly, the determining factor is probably a micro-organism derived from without, though cultivation and inoculation experiments could alone prove the truth of this theory. Thirdly, the initial lesions, both of the local and general gangrenous eruptions, present the same characters.

Electricity for Arrested Lactation.—The patient was the mother of three children, all of whom had been brought up at the breast. The youngest had been fed in the same way for eleven months, when an attack of pneumonia interrupted this method of feeding. Two days later, when the infant was well enough to recommence, the secretion had completely ceased. This state of things persisted for a fortnight, during which the child, who refused other food, rapidly lost weight. It occurred to Dr. Aubert to try the effect of local faradization. The electrodes, well saturated with moisture, were placed right and left of each breast, and the current was graduated so as not to cause contraction of the pectoral muscles nor pain. After the first *séance*, which lasted twenty minutes, the right breast had evidently increased in size. The second day a few drops of milky fluid exuded, and on the third day a spontaneous flow took place in both breasts. On the fifth day the child was enabled to resume the breast-feeding, and further treatment had become unnecessary. A second observation is reported by Dr. Becquerel in a young woman of 20, in whom the lacteal secretion had been arrested in consequence of reiterated and intense mental emotion. After eight days' suppression, three *séances* of twenty minutes' duration sufficed to re-establish the secretion, which then continued in a normal way. The same result was obtained quite unexpectedly in a woman seven months after her confinement, where the arrest of the secretion had been immediate. Pierron, in a recent paper, stated his belief that by this means lactation could be caused in virgins.—*Lond. Med. Rec.*

MISCELLANY.

THE ENGLISH COMMISSION ON PASTEUR'S METHOD OF PREVENTING OR TREATING HYDROPHOBIA.—The British Parliamentary Commission, which has been engaged in the study of Pasteur's work for several years, has finally presented a report, which expresses confidence in the truth of Pasteur's claims with regard (1) to the presence of hydrophobia virus in the spinal cord of animals dying with the disease, (2) to its transmissibility to other animals by inoculation, (3) to the fact that animals can thus be rendered refractory to subsequent inoculations, or even the bites of rabid animals. Finally, it is highly probable, even after such bites have been inflicted upon unprotected subjects, that subsequent inoculation as practised by Pasteur is of service in preventing the development of the disease.

The committee observe, "Making a fair allowance for uncertainties and other questions which cannot now be settled, we believe it sure that, excluding deaths after bites by rabid wolves, the proportion of deaths in the two thousand six hundred and eighty-two persons bitten by other animals was between 1 and 1.2 per cent., a proportion far lower than the lowest ever estimated among those not submitted to M. Pasteur's treatment, showing, even at this lowest estimate, a saving of not less than one hundred lives."

The value of M. Pasteur's method is further confirmed by the results obtained in certain groups of his cases. Of two hundred and thirty-three persons bitten by animals in which rabies was proved, either by inoculation from their spinal cords or by the occurrence of rabies in other animals or persons bitten by them, only four died. Without inoculation it is more than probable that at least forty would have died. Further illustration of this successful result is shown among other additional groups of cases. Between the end of last December and the end of March, M. Pasteur inoculated five hundred and nine persons bitten by animals proved to be rabid, either by inoculation from their spinal cords or by the death of some of those bitten by them, or as reported on by veterinary surgeons. Of this number only two have died. One of these was bitten by a wolf a month before inoculation, and died after only three days' treatment. If we omit say one-half of these cases as being too recent, the other two hundred and fifty have had a mortality of less than one per cent., instead of twenty to thirty per cent.

"From the evidence of all these facts," the committee then say, "we think it certain that the inoculations practised by M. Pasteur on persons bitten by rabid animals have prevented the occurrence of hydrophobia in the large proportion of those who, if they had not been so inoculated, would have died of that disease; and we believe that the value of his discovery will be found much greater than can be estimated by its present utility, for it shows a method of inoculation by which it may be possible to avert after infection other diseases besides hydrophobia. His researches have also added very largely to the knowledge of this disease, and have supplied what is of the highest practical value,—namely, a sure means of determining whether an animal that has died under a suspicion of rabies was affected really with the disease or not."

MEDICAL BOOKS AND AUTHORITIES IN COURTS OF LAW.—The law in regard to medical books as evidence in courts of law is fairly and very intelligibly stated in a recent Kansas case, as follows. Dr. Campbell, a practising physician of more than twelve years' experience, testified as an expert, and, after showing some of the effects of chloroform upon the human system, was asked, "How is it regarded by medical authorities upon that subject, and by medical men who are authority upon that subject?" He answered, "It is regarded by writers on that subject, and by all men who have used it to any great extent, and by all universally, so far as I know, as a very dangerous agent, and an agent which, if pushed beyond a certain point, will produce death,—that is, is in danger always of producing death. To be sure, a great many men have used it a great deal, and have had no bad results from it." Although the courts are not uniform in their holdings upon the admissibility in evidence of medical and scientific books, the great weight of authority is that they cannot be admitted to prove the declarations of opinions which they contain. This is upon the theory that the authors did not write under oath, and that their grounds of belief and processes of reasoning cannot be tested by cross-examination.

THE WESTERN PENNSYLVANIA MEDICAL COLLEGE.—A graduating-class banquet, commemorative of the termination of the first year's lectures, was given by the Faculty on March 24, 1887. The number of graduates was twenty-two, the enrolment being sixty. The success of the first year of this school has been phenomenal. The trustees have erected a commodious college-building immediately adjoining the premises of the Western Pennsylvania Hospital. The corps of Professors in the Faculty numbers twenty-two, with an equal number of adjunct teachers and assistants. The next Fall course will begin September 27. A large proportion of the undergraduates have entered the Junior Class for the three years' graded course provided by the College. For Catalogue address Professor W. J. Asdale, Pittsburg.

A NEW MEDICINAL PLANT.—The leaves of the Gymnema Sylvestre of India, according to Professor Thistleton Dyer (in *Nature*), have the curious effect when chewed of abolishing temporarily the perception of sweet things by the tongue. Governor Elles, of Madras, is reported as having found that it "abolishes the power of enjoying a cigar." If it would abolish the taste for whiskey as well as tobacco it would be a valuable addition to our materia medica.

A BUREAU OF GENERAL INFORMATION.—Mr. Joseph B. Marvin, whose office is in the Corcoran Building, Washington, D.C., is the manager of "The Bureau of General Information" for research in the Library of the Surgeon-General's Office, which promises to be of considerable service to medical writers. The terms are one dollar per hour for research, ten cents a folio for type-writer transcripts, and thirty cents a folio for translations.

DR. PACKARD has removed to No. 1926 Spruce Street, Philadelphia.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 3, 1887, *TO JULY* 16, 1887.

LIEUTENANT-COLONEL A. HEGER, SURGEON.—Ordered to Fort Columbus, New York Harbor.

MAJOR J. H. JANEWAY, SURGEON.—Ordered to Benicia Barracks as post-surgeon; also as attending surgeon at Benicia Arsenal, California.

CAPTAIN H. P. BIRMINGHAM, ASSISTANT-SURGEON.—Ordered to Fort Myer, Virginia.

FIRST-LIEUTENANT C. E. WOODRUFF, ASSISTANT-SURGEON.—Ordered to Fort Mackinac, Michigan.

CAPTAIN C. K. WINNE, ASSISTANT-SURGEON.—Ordered to Fort Wadsworth, New York Harbor.

CAPTAIN VALERY HAVARD, ASSISTANT-SURGEON.—Ordered to Fort A. Lincoln, Dakota Territory.

CAPTAIN L. M. MAUS, ASSISTANT-SURGEON.—Ordered to Fort Schuyler, New York Harbor.

CAPTAIN J. B. GIRARD, ASSISTANT-SURGEON.—Ordered to Fort Lowell, Arizona.

FIRST-LIEUTENANT J. D. POINDEXTER, ASSISTANT-SURGEON.—Ordered to Camp Poplar River, Montana Territory.

FIRST-LIEUTENANT C. N. B. MACAULEY, ASSISTANT-SURGEON.—Ordered to Fort Gibson, Indian Territory.

CAPTAIN C. B. BYRNE, ASSISTANT-SURGEON.—Ordered to Washington Barracks, District of Columbia.

CAPTAIN T. E. WILCOX, ASSISTANT-SURGEON.—Ordered to Fort Niobrara, Nebraska.

MAJOR H. LIPPINCOTT, SURGEON.—Ordered to Fort Union, New Mexico.

MAJOR P. J. A. CLEARY, SURGEON.—Ordered to Fort D. A. Russell, Wyoming.

MAJOR D. G. CALDWELL, SURGEON.—Ordered to Fort Assiniboine, Montana Territory.

CAPTAIN G. H. TORNEY, ASSISTANT-SURGEON.—Ordered to Fort Robinson, Nebraska.

CAPTAIN WALTER REED, ASSISTANT-SURGEON.—Ordered to Mount Vernon Barracks, Alabama.

CAPTAIN J. H. PATZKI, ASSISTANT-SURGEON.—Ordered to Fort Huachuca, Arizona Territory.

CAPTAIN R. G. EBERT, ASSISTANT-SURGEON.—Ordered to Fort Custer, Montana Territory.

FIRST LIEUTENANT J. E. PILCHER, ASSISTANT-SURGEON.—Ordered to Fort Monroe, Virginia.

CAPTAIN J. DEB. W. GARDINER, ASSISTANT-SURGEON.—Ordered to Fort Washakie, Wyoming Territory.

FIRST-LIEUTENANT A. R CHAPIN, ASSISTANT-SURGEON.—Ordered to Newport Barracks, Kentucky.

MAJOR W. H FORWOOD, SURGEON.—Ordered to Fort Snelling, Minnesota.

CAPTAIN H. O. PERLEY, ASSISTANT-SURGEON.—Ordered to Fort Wayne, Michigan
S. O. 156, A. G. O., July 8, 1887.

MAJOR WILLIAM S. TREMAINE, SURGEON.—Ordered for examination by Army Retiring Board at Governor's Island, New York Harbor. S. O. 151, A. G. O., July 1, 1887.

S. O. 159, par. 2, A. G. O., July 12, 1887, assigns CAPTAIN W. MATTHEWS, ASSISTANT-SURGEON, as member of Army Retiring Board at Washington, D.C., and relieves CAPTAIN J. O. SKINNER, ASSISTANT-SURGEON.

CAPTAIN J. O. SKINNER, ASSISTANT-SURGEON.—Granted leave of absence for four months, on surgeon's certificate of disability. S. O. 151, A. G. O., July 1, 1887.

CAPTAINS L. M MAUS AND H. O. PERLEY, ASSISTANT-SURGEONS.—Ordered to accompany the Eleventh Infantry in changing station from Department of Dakota to Department of the East. S. O. 158, A. G. O., July 11, 1887,

CAPTAIN E. F. GARDNER, ASSISTANT-SURGEON.—Ordered to accompany the Twelfth Infantry from Madison Barracks to Duluth, and to return with Eleventh Infantry. S. O. 143, Division of the Atlantic, July 13, 1887.

CAPTAIN R. G. EBERT, ASSISTANT-SURGEON.—Will, in changing station from Fort Hamilton, New York Harbor, to Fort Custer, Montana, accompany the Twelfth Infantry from Department of the East to Department of Dakota. S. O. 159, A. G. O., July 12, 1887.

A Board of Medical Officers, to consist of MAJOR J. S. BILLINGS, SURGEON, CAPTAIN W. MATTHEWS, ASSISTANT-SURGEON, CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON, is constituted to meet in this city for the examination of a candidate for admission to the Medical Corps of the Army. S. O. 157, A. G. O., July 9, 1887.

FIRST-LIEUTENANT H. S. T. HARRIS, ASSISTANT-SURGEON.—Will be relieved from duty at Fort Ringgold, Texas, upon the return of Assistant-Surgeon W. F. Carter, and will then report to commanding officer at Fort McIntosh, Texas, for duty. S. O. 73, Department of Texas, June 27, 1887.

FIRST-LIEUTENANT F. V. WALKER, ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 160, A. G. O , July 13, 1887.

FIRST LIEUTENANT JULIAN M. CABELL, ASSISTANT-SURGEON.—Ordered for duty as medical officer at Department Rifle-Camp, near Bellevue, Nebraska, August 1 next. S. O. 66, Department of the Platte, July 8, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FOR THE WEEK ENDING JULY 9, 1887.

MEDICAL-INSPECTOR A. HUDSON.—Detached from the "Trenton," and wait orders.

MEDICAL-INSPECTOR W. K. SCOFIELD.—Ordered to relieve Medical-Inspector Hudson on the "Trenton."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING JULY 16, 1887.

LONG, W. H., SURGEON.—Granted leave of absence for thirty days, on account of sickness, July 12, 1887.

AUSTIN, H. W., SURGEON.—Granted leave of absence for thirty days, July 16, 1887.

WATKINS, R. B., ASSISTANT-SURGEON.—Relieved from duty at Marine Hospital, Detroit, Michigan; ordered to assume charge of service at Evansville, Indiana, July 9, 1887.